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Educational News and Editorial Comment

SCHOOL ATTENDANCE IN THE UNITED STATES

Despite the fact that compulsory school attendance statutes are in force in all the states of the Union, the number of children of school age who are not in regular school attendance is still surprisingly large. The magnitude of the problem of non-attendance is indicated by the following paragraphs quoted from a recent bulletin of the United States Office of Education entitled *Compulsory School Attendance Laws and Their Administration* (Bulletin Number 4, 1935).

The ideal of having all the children of elementary- and secondary-school age (6 to 17, inclusive) attend school has not been attained. According to the 1930 United States Census, 4,173,951, or 14.3 per cent, of the 29,066,072 children 6 to 17 years of age were not attending school. Of the number not attending school, 1,658,965, or 39.7 per cent, were of elementary-school age (6 to 13, inclusive), and 2,514,986, or 60.3 per cent, were of high-school age (14 to 17, inclusive).

The foregoing figures, which show the total number of children 6 to 17 years of age not in school at all, do not present the entire picture of the problem of school attendance since they do not take into account the average daily attendance of those who were enrolled. Considering attendance in relation to enrolment in the public schools 4,413,129, or 17.2 per cent, of the 25,678,015 children enrolled were absent each day. Adding this number to the number of children

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not in school at all, the grand total number of children not in school on any one day during the school term was 8,587,080. This figure, however, is only approximate, since the enrolments and attendance in private and parochial schools are not included, and since some of the children included in the average daily attendance figures are 5 years of age and some are 18 or more years of age, but it is plainly evident that a huge army of children are out of school each day—in round numbers 8,500,000, or approximately 27.5 per cent, of the school population 6 to 17 years of age.

There are thus evidently two parts to the problem of school attendance—one is that of enrolling all the children of elementary- and secondary-school age, and the other is that of keeping those enrolled in regular attendance.

The first-named problem has been solved in large part for children of compulsory school attendance age. Of the total number of children of the usual absolute compulsory-attendance age, that is, the age where very few exemptions are allowed (7 to 13, inclusive), 95.3 per cent of the total number of children of this age group were enrolled in schools, and 88.8 per cent of the children 14 and 15 years of age who are usually subject to the compulsory-attendance laws but who may be exempted for reasons in addition to those provided for children 7 to 13 years of age were attending school, while only 66.3 per cent of the children 6 years of age and only 57.3 per cent of those 16 and 17 years of age were enrolled. . . . .

The other phase of the attendance problem is that of keeping the children enrolled in regular attendance. Of course, perfect attendance cannot be expected of every child enrolled, but there is, nevertheless, the problem of unnecessary absences. In every community there are some parents who will keep their children out of school for a day or two at a time to assist with chores and with farm work. Data are not available to show for the entire country how many pupils are unlawfully absent, but that many children are absent from school without lawful excuses is evident according to data compiled by the Pennsylvania State Department of Public Instruction (*Keeping in Touch with the Schools*, pp. 8, 11. Statistical Research Studies, April, 1934, No. 7). In 1933 the number of sessions of absence in that state amounted to 36,861,941. Of this number 1,731,631 were unexcused. There were in that year 57,409 pupils, or 2.8 per cent, of the total enrolment unlawfully absent on first offense and 24,412, or 1.2 per cent, of the enrolment unlawfully absent on the second offense. If these percentages of unlawful absences may be regarded as average, the total number of unlawful absences for the first offense in the country as a whole amounts to 735,712 and for the second offense to 315,305.

During the past two decades there has, however, been a marked improvement in school attendance. We quote again from the Office of Education bulletin.

Although the ideal of having every child of elementary- and secondary-school age, and especially all children from 7 to 16 years of age, attend school has not

been realized, the percentage of such children enrolled in school has been steadily increasing, and attendance on the part of those enrolled has greatly improved. [Table I] shows by age groups for the entire country the per cent of children attending school in 1910 and in 1930.

No data are available to show by ages the increase in regularity of attendance on the part of the children enrolled, but the per cent of public-school children enrolled, attending each day, increased from 72.1 in 1910 to 82.8 in 1930 and to 84.7 per cent in 1932.

TABLE I

Age	1910	1930
5	17.0	20.0
6	52.1	66.3
7 to 13	86.1	95.3
14 and 15	75.0	88.8
16 and 17	43.1	57.3
18 to 20	15.2	21.4

Changes in the statutes during the past two decades with respect to school-attendance requirements are summarized as follows:

In only two states is the minimum compulsory school attendance age placed at six years. These states are New Mexico and Ohio. The minimum compulsory attendance age in thirty states is seven years, and in sixteen states it is eight years. Of the forty-two states that had compulsory attendance laws in 1914, none had a minimum age of six years, sixteen had a minimum age of seven years, twenty-five a minimum age of eight years, and one had a minimum age of nine years.

The maximum compulsory attendance age in 1934 was less than sixteen years in only six states, sixteen years in thirty-one states, seventeen in six states, and eighteen in five states. In 1914, twenty-two of the forty-two states having compulsory attendance laws placed the maximum compulsory attendance age at less than sixteen years; nineteen at sixteen years; and only one at eighteen years. [Table II] shows for 1914 and 1934 the minimum and maximum compulsory attendance ages for full-time schools and the number of states having each of the ages indicated.

There has been a steady increase in the number of years of required school attendance as well as an increase in the amount of attendance required each year.

The number of years of school attendance required varies from six years in Georgia, South Carolina, and Texas to twelve years in Ohio. The usual number of years' attendance required is nine; ten states require eight years, and twenty-two require nine years. (Texas required nine years after May 6, 1935.)

The tendency has been to increase the number of years of required attendance. Of the states that had compulsory attendance laws in 1914, seven required children to attend school for nine years. In 1914, sixteen states required at-

TABLE II

Minimum Compulsory Attendance Age	Number of States		Maximum Compulsory Attendance Age	Number of States	
	1914	1934		1914	1934
6	0	2	12	3	0
7	16	30	14	10	5
8	25	16	15	9	1
9	1	0	16	19	31
			17	0	6
			18	1	5

tendance for less than eight years and six had no attendance laws; in 1934, only five states required less than eight years. [Table III] shows for 1914 and 1934 the number of years' attendance required and the number of states requiring the years specified.

TABLE III

Number of Years' Attendance Required	Number of States	
	1914	1934
0	6	0
4	2	0
5	1	0
6	4	3
7	9	2
8	18	10
9	7	22
10	1	9
11	0	1
12	0	1

One of the defects in many of the early compulsory school attendance laws was that they did not prescribe a definite time for attending school each year, but instead specified a certain proportion of the time, or a certain number of days, or a certain number of consecutive weeks without stating when the period was to begin. This led to confusion, and it was often difficult to determine when a child had attended the prescribed time. Most states, however, now require attendance for the full period school is in session in the district, which in some districts exceeds the minimum term prescribed by law.

The Relation of the Teacher to the Community

Academic freedom and the function of the school as an instrument of social change have, of late, been much discussed. From time to time in the editorial columns of the *Elementary School Journal*, we have expressed our profound conviction that teachers in school and college alike must be free to seek the truth and to teach it. We have urged, too, the importance of the school as an agency of social direction. We are disposed to regard society as a function of the school rather than to regard the school as a function of society. What is often overlooked, however, is the fact that the mores constitute a vital force which teachers can nowhere escape. The mores may be ill defined, but their sanctions are not difficult to discover.

In a recent issue of the *Journal of Educational Sociology*, Professor Ellsworth Faris, of the University of Chicago, discusses certain sociological principles which govern the relation of the teacher to the community. We quote portions of Professor Faris' article.

We wish our children to be taught those things that we want them to know. We resent being compelled to send our children to teachers who will influence them in ways distasteful to us. Our laws permit a Roman Catholic parent to reject a secular school and choose a religious one so that the instruction imparted may be in accordance with his convictions. In Fascist Italy, in Bolshevik Russia, and in Nazi Germany every teacher must be loyal to an approved philosophy of life and government. This seems very foreign to American ways of thinking, but the difference is very slight and only a matter of degree, due, perhaps, to the relatively peaceful conditions under which we yet live.

Education at least in schools is for the purpose of transmitting to our children our social heritage. The school is a channel, an aqueduct through which our culture is transmitted to those who are to inherit it. Therefore what is taught in the schools is of vital concern to those who have set them up and who pay for carrying them on. If the teachers teach what the community regards as unwholesome, the community cannot avoid protest and opposition.

The content of the teaching is in the hands of professional men and women who are skilled to impart and who are representatives of that level of culture which the community has attained. The teacher is no private individual, free to say or to do anything he may choose according to his whim. He is a trusted public official, standing in some respect *in loco parentis*, trained at public expense, chosen for a public service, and maintained at great financial sacrifice. The mores set limits to what he may appropriately do or say in his capacity as a teacher.

It will probably not be questioned by any sociologist that the mores consti-

tute an impersonal force, never clearly formulated, always appearing as true and right, not open to debate, and not to be consciously and purposefully set up or deliberately modified. The mores change, but slowly and almost unconsciously. To offend against the mores is to insure opposition and conflict. To argue that the mores are untenable and that the people who hold to them are illogical is to confess ignorance of a fundamental sociological truth. A young teacher was interrupted in his remarks by a girl who objected that what he had said contradicted the Bible, and quoted the passage about woman being made from Adam's rib. He answered in a sneering manner: "Nobody believes that stuff any more." His biology was undoubtedly sound, but his knowledge of the sociology of the mores was defective. He was sent to Coventry for the rest of the year and not asked to teach any more.

The question of the freedom of the teacher and his obligation to the community is one aspect of the question of the relation of the individual to society. Even the university research professor is not an isolated individual responsible only to himself. He is a favored and fortunate appointee, subsidized financially so that he need do no economically productive labor, and permitted to subsist on the surplus of the work of other men. His very freedom is a gift of society, a society which trusts him and expects some return on the investment they have made in training and sustaining him.

For the individual apart from society is a meaningless abstraction. Human life is always essentially dramatic in the sense that we are assigned to rôles which we are to play after the manner of characters on the stage. The rôle of a teacher is none the less a rôle because the lines are not written out in detail and formally agreed to, or the details of behavior minutely prescribed. As a member of the school system there are obligations and duties as well as rights of self-expression and freedom. He who keeps in mind that he is the product of an institution and the beneficiary of society will be able to subordinate his private notions, however dear, to the public good and the public peace. However informal the expectation may be, the prestige of the office is a public trust.

Nor does this principle imply any danger to truth nor any disloyalty which might be involved in its suppression. For truth, if it is fully known, can be proved. And if it is fully proved, there is small danger that it will be rejected. Not truth, but unproved and unprovable opinion is the usual cause of conflict. And we must confess that in social science the body of demonstrated truth is much smaller than the total of untested opinions. Those who are most zealous in the cause of academic freedom could do the cause no greater service than to insist on the validity of the distinction.

The relation of the teacher to his community is, therefore, that of a representative whose function it is to induct the young into the social heritage which the community values. He need not be an average member, indeed, he may well be somewhat in advance of those who have chosen him. But he will not wisely scorn the mores. To do so is to invite trouble and to display at the same time an unfamiliarity with a sound sociological principle.

A Notable Series of Pamphlets on Contemporary Social Problems

Adult education in this country is faced with the necessity of defining its purposes and of organizing its instructional content. The essential goals of adult education are both personal and social.

On the personal side, individuals will have to be taught to engage in activities from which they derive wholesome satisfactions. These activities will, in the nature of the case, be extremely varied, covering in fact practically the whole range of human interests. Moreover, there will always be a large number of persons in need of vocational education or re-education. Whether or not technological advance in the long run displaces labor, it seems clear that inventions and efficient management create pools of at least temporary unemployment and that many persons will find it necessary to adjust themselves to new jobs under changed conditions. Society, through its agencies of adult education, can scarcely escape the responsibility of assisting these individuals in making the necessary readjustments.

We do not underestimate the importance of the contributions which adult education can make to personal happiness and well-being, but, after all, the most significant contributions of adult education will be social rather than personal. That is to say, the most essential objective is to cultivate in adults an understanding of the workings of our social arrangements. In a society characterized by swift social movements and by shifting social policies, the diffusion of social intelligence becomes imperative if representative institutions are to survive.

The cultivation of social understanding among the adult members of society requires the development of adequate instructional material in the social sciences. The kind of instructional material that is needed is admirably illustrated by a series of pamphlets recently published by the University of Chicago Press under the general title "American Primers." The pamphlets were prepared under a grant from the General Education Board to the American Council on Education. They are designed "to meet the needs of school classes, adult-education courses, and workers' groups for readable materials in the social sciences." They represent an attempt to present a scientific but non-technical discussion of current issues in

economics, politics, and sociology. The authors of these pamphlets have accomplished their purpose admirably. They have succeeded in discussing complicated social issues in a style that is simple, direct, interesting, and colorful. One can scarcely read these pamphlets without being convinced that complex social issues can be made intelligible to members of the adult population generally.

The high professional standing of the authors of these pamphlets insures their accuracy and fairness. The editor of the series is Percy W. Bidwell, of the University of Buffalo. The titles and authors are as follows: *Youth in the Depression*, Kingsley Davis, professor of sociology, Smith College; *Strikes*, Joseph J. Senturia, formerly assistant editor of the *Encyclopedia of the Social Sciences; Friends or Enemies?* Julius W. Pratt, professor of history at the University of Buffalo; *Money*, Marc Rose, editor of *Business Week*, and Roman L. Horne, formerly professor of economics at the University of Buffalo, now with the Agricultural Adjustment Administration at Washington; *Crime*, Nathaniel Cantor, chairman of the Committee on Criminal Law of the American Prison Association and a member of the faculty of the University of Buffalo; *Jobs or the Dole?* Neal B. DeNood, formerly a member of the faculty at Harvard University and now with the Works Progress Administration in Massachusetts; *Business and Government*, John C. Crighton, formerly a member of the faculty at Lynchburg College, and Joseph J. Senturia; *The Farm Business*, Roman L. Horne; and *You and Machines*, William F. Ogburn, professor of sociology at the University of Chicago.

Pennsylvania Curriculum Studies

The Department of Public Instruction of Pennsylvania is undertaking the publication of a series of bulletins on the curriculum of the elementary and the junior high schools. It is not intended that the material in these bulletins should constitute a course of study to be followed in any particular school; the material is designed rather to aid teachers in developing courses of study. The most recent bulletin is entitled *Geographic Education in Elementary and Junior High Schools* (Bulletin 91). Suggestions are made for the development of a course of study from the fourth to the eighth year, inclusive. The major objectives of geography study for each year

are discussed in some detail; numerous suggestions are made for the development of units; and there is included an extensive bibliography covering the work of each year.

Other bulletins to be published at an early date will bear the following titles: *Suggestions for Developing Guidance Practices in Secondary Schools; Organization and Administration of Extension Centers, Schools and Classes; Course of Study in Bookkeeping for Senior High Schools; Organization and Administration of Special Education Classes for the Orthogenic Backward; Parent Education; The Use of Radio in Developing Instructional Programs;* and *Highway Safety.*

Here and There in School Administration

A new report card in Detroit.—A recent issue of the *Detroit Educational News* calls attention to the adoption of a new report card for pupils in the elementary grades of the Detroit schools. The card calls for a report on such qualities of citizenship as adaptability, co-operation, initiative, reliability, and self-control. If a pupil is failing to develop any of these qualities, a check is placed in the designated place; if the pupil's efforts are acceptable, no mark is entered on the card. Another innovation is the elimination of definite scholarship marks, such as A, B, and C, and the substitution therefor of the marks of E (excellent), S (satisfactory), and U (unsatisfactory).

Minneapolis adopts the cumulative-record card.—Superintendent C. R. Reed, of Minneapolis, through a committee appointed more than a year ago, has developed a new cumulative-record card. The *School Bulletin* of Minneapolis reports that the purpose of the committee was to devise "a system of records that would help teachers to individualize instruction, to consider the growth a child makes as more important than grade standards, and to make personality development the real goal of the schools." The new record system makes it possible to enter on one card information about a child's family, his health, his ability as shown by tests, his progress in school subjects, and his personality.

A new organization in the early grades in New York City.—According to the *New York Sun*, "Unit promotions" is the official designa-

tion of a significant experiment recently initiated in a number of elementary schools in New York City. The purpose of the experiment is to reduce non-promotion in the primary grades. In approximately fifty elementary schools there will be neither advancement nor retardation in the primary grades. Pupils will be kept under one teacher and in one group during the kindergarten and the first two years of the regular school work. At the end of three years the pupils' ability to advance to higher grades will be determined. The experiment is said to be based on the observation that many pupils in the lower grades fail to adjust themselves to school life, not because of lack of innate ability, but because they find the break between home and school too abrupt. Whether or not this explanation be the correct one, it is a fact that failure in the New York schools, as in other cities, is highest in the early grades. During the past year, for example, only 89 per cent of the pupils of Grade 1 A were promoted. In Grades 1 B and 2 A the percentage was 93, while in the upper grades it was 95 and above.

Good school publicity in Indianapolis.—The Indianapolis Federation of Public School Teachers has published a pamphlet which bears the title *The Indianapolis Public Schools and Taxes.* The purpose of the pamphlet is to make intelligible to citizens generally certain basic facts with respect to the support of the schools of the city. Data on the following issues are presented in simple graphic and tabular form: "Are Property Taxes for Schools Less than They Were?" "How Much Does It Cost To Educate a Child?" "Do Schools Here Cost More than They Used To Cost?" "Do We Pay More for Schools than They Do in Other Cities?" "Are Indianapolis Teachers Paid as Much as Other Teachers?" The pamphlet is an excellent example of the right kind of school publicity.

The survey of the Cincinnati public schools.—The United States Office of Education has completed an extensive survey of the Cincinnati public schools. The survey was undertaken at the request of the Board of Education and the Bureau of Governmental Research of the city of Cincinnati. Sections of the report are devoted to the present program of education; the status of, and provisions for, the teaching staff; the administration of the schools and the services afforded through the superintendent's office; provisions

for housing and equipping the schools; administration of business offices; and the present program of financing the schools. Each chapter in the report describes present practices, evaluates the effectiveness or adequacy of these practices, and makes recommendations for improvement.

The income tax in Pennsylvania.—The monthly bulletin of the State Department of Public Instruction, *Pennsylvania Public Education*, reports that a friendly test suit attacking the constitutionality of Pennsylvania's new graduated income-tax law has been filed by the city solicitor of Philadelphia. It is contended that the statute violates a provision in the constitution which provides that "all taxes shall be uniform, upon the same class of subjects, within the territorial limits of the authority levying the tax." The contention is also being made that the income-tax law is special legislation. A great deal of interest attaches to the decision of the court. If the statute is upheld, twenty-five million dollars derived from the income tax will be made available for school support for the school year 1936–37. Moreover, the decision of the court will be awaited with interest in other states having a similar constitutional provision.

The School Medical Service in England

A recent issue of the London *Times Educational Supplement* carries an account of the development and present status of the school medical service in England. Beginning about 1910 the Medical Department of the Board of Education began a vigorous campaign to induce local education authorities to establish treatment clinics for school children. Inspection revealed that there was urgent need for medical treatment, and grants for this purpose began to be made from the national exchequer. By 1913 local education authorities were maintaining 140 treatment centers in which arrangements were made for the treatment of eyes, ears, nose and throat, teeth, and minor ailments. The World War made Englishmen particularly sensitive to the physical well-being of youth and greatly strengthened the development of treatment centers. The following paragraphs quoted from the *Supplement* summarize the major lines of development of the school health service since 1910.

In comparing conditions in 1910 with the advance in medical work which has been attained today, there is good reason to be cheered by the progress which has been achieved. The little group of 30 treatment centers in 1910 increased to 1,880 in 1933, and the number of local authorities making provision for this work has gone up from 30 to 315. There are today 233 authorities which organize orthopedic treatment. All authorities but three make arrangements for caring for minor ailments, dental defects, and defective vision. Ringworm in many areas has almost disappeared. Open-air schools have multiplied; there are now 146, with provision for 14,699 children. There are today 62 recognized nursery schools with accommodation for 4,933 children. For one school for tuberculous children in 1910 there are now 37. Special schools have more than doubled and now accommodate 57,687 children. Physical training is receiving more attention than at any time in the history of education in this country. A new syllabus dealing with the matter was issued by the Board of Education in 1933 and the opening of Carnegie Hall, the new Physical Training College for men, is likely to have great influence on health work in boys' schools in the future.

Finally it is of interest to compare the sum of £78,000 spent on medical work in the schools in 1910–11 with the cost of the service today. In 1933–34 the net expenditure of local education authorities on medical inspection and treatment, met from grants and rates, was £2,019,073, and no one who has watched the great improvement which has taken place in the physique of school children during the past quarter of a century will grudge this outlay from public funds.

Caring for the Child during the Summer Vacation

The Child Study Association of America has recently published a pamphlet entitled *Community Programs for Summer Play Schools*. The following paragraphs from this pamphlet indicate the need of more adequate provisions for child welfare during the summer months.

Recognition of summer needs.—Communities have characteristically assumed increasing burdens and responsibilities for keeping children actively occupied in the profitable educational enterprises of "school." The same communities have been almost uniformly indifferent to the fate of their children when the schools were closed for the summer.

We may no longer assume that homes generally are equipped to make adequate use of the children's free time in the summer; nor that the community has discharged its obligation to the children—that is, has provided adequately for its own future—when it has established a school plant with its facilities, when it has installed machinery for compelling attendance over two-thirds or three-fourths of the year, and when it has excluded its children from the shops and factories. The need can be met only by some plan that contemplates eventually serving all children in various ways, and for the whole year.

It should be recognized from the first that the traditional school pattern cannot serve as the basis of future provision for children's summers. A satisfactory program of summer activities will have to yield all the values that various forms of recreation now give. It will include much more of spontaneous and creative activity than is now involved in most summer programs provided for children. And it will be more directly related to the out-of-doors.

In the course of years more and more communities have in fact made provision for the recreation of children during the summer. There are parks and playgrounds. Welfare agencies have made substantial contributions to meet the summer needs of the underprivileged. Commercial camps have grown up to meet the need for organizing and supervising play activities that have important educational possibilities. Many parents have learned to take children to the country or to the shore for recuperation and new experiences. But when we examine the recreational facilities and opportunities available in communities throughout the country, we find them to be woefully inadequate as to the number of children reached, as to the richness and diversity of opportunities, and as to their suitability from the standpoint of child development.

Provisions inadequate.—The Subcommittee on Summer Vacation Activities of the White House Conference estimated a total of five million children of school age cared for by various agencies in the summer time. Figures taken from the *Biennial Survey of Education* of the United States Office of Education show, for 1932, a total enrolment in the public schools of 26,275,441 pupils, out of a population of 32,031,549 in the age groups from five to seventeen. The need then in mere numbers to be served is immense.

Playgrounds and camps represent the typical pursuits, where attention is given to the children's needs for the summer. But playgrounds serve an estimated total of fewer than two million children. And though there is a wide variation as to the daily period covered by attendance at playgrounds, it falls very far short of approximating the bulk of the day for the majority of children reached. The largest estimate of the aggregate number of boys and girls attending camps of all kinds, public and private, in 1930–31 was 1,682,907. This is a sizable number, but over 43 per cent of these young people were visitors to the national parks; and the duration of camp experience for almost all this million and a half was but two weeks or less. The camps of the principal social agencies and private commercial camps reported for that year fewer than 30 per cent of the total, 538,897. . . . .

A few children attend summer schools to make up academic work. The number doing school work during the summer is indicated by the fact that the proportion of city day pupils who attend summer sessions is just short of 4 per cent.

A large part of the pamphlet is devoted to a description of what is now being done for the child during the summer by various social agencies. Special attention is given to the summer play school—its origin, program, and organization. The conclusion is reached

that "the play-school type of undertaking lends itself admirably to the utilization of the community's resources in plant, equipment, personnel, and financial means for a comprehensive and varied program of educational activities and experiences adapted to the actual conditions and personality and health of the children, as well as to the time and place."

Who's Who in This Issue

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THE IMPROVEMENT OF READING AND STUDY HABITS

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READING REQUIRES VARIOUS TYPES OF SKILLS

The tendency to recognize that reading of the work or study type requires certain specific abilities not ordinarily required in reading of the recreatory type has within recent years become marked—so marked that materials for the development of work habits in reading are becoming common even in the elementary schools. Recognition that textbooks in history, geography, science, and arithmetic present special reading difficulties for most children is widespread. McMurry[1] early defined "study" as purposive mental work involved in solving a problem. This conception differentiates the work or study type of reading from that which is involved in merely following a narrative or enjoying the melodic sound of a poem. Yet is it recognized that reading, whatever the purpose of the reader may be, is always a process of interpreting the meaning of the symbols on the printed page? These symbols vary in complexity and in organization. Some pages present patterns of one kind and some of another. Some patterns are easier to interpret than others. Readers differ tremendously in their abilities to interpret the patterns. No matter what kind of instruction is experienced, normal human beings become more mature in their thought-processes as they grow older and patterns of thinking become more and more complex with the years. Nevertheless, there is undoubtedly a tendency to confront children at any given age with types of concepts and with language patterns that are too difficult for them.

In spite of the progress which research has made in unraveling the intricacies of that difficult process called reading, the problem of

[1] F. M. McMurry, *How To Study and Teaching How To Study*, p. 283. Boston: Houghton Mifflin Co., 1909.

reading for the probable thousands of specific purposes which arise in life is yet scarcely understood, let alone solved. Moreover, research has made clear that the vocabularies of history, geography, and science are in many ways markedly different from the vocabulary used in communicating ideas in ordinary living. It naturally follows that, if we are to make any progress in teaching children to study serious subjects, they must learn the vocabularies of these subjects and the patterns or ways of thinking which characterize the subjects. While considerable speculation has been made concerning these problems, research has scarcely scratched the surface.

TYPES OF READING MATERIALS

Studies are needed to discover the possibilities of interesting children in materials not primarily narrative in character. McKee,[1] Gates,[2] Snyder,[3] and others have already shown that well-written factual materials are not necessarily distasteful to pupils. The wide popularity among boys of certain magazines of the popular-science type and the interest shown by girls in magazines dealing with clothes, home life, and the like show that factual reading may well have an important place in life. There is, however, a great distance to go before the majority of children in the elementary school will come to have any feeling other than distaste as they approach the study of history, geography, and science—not to mention arithmetic. One of the most difficult problems that is faced in attempting to develop work habits in reading is the great gulf between what the authors of books think children ought to learn and what children themselves are interested in. This problem is not so serious at the college and the high-school levels on account of the maturity of the pupils (although it may well be serious enough there), but it is very difficult in the middle grades of the elementary school. One of the greatest difficulties is presented because of lack of knowledge of

[1] Paul McKee, " 'Fact' Form and 'Story' Form Reading Matter," *Elementary English Review*, III (January, 1926), 3–8.

[2] Arthur I. Gates, *Reading for Public School Administrators*, pp. 12–15. New York: Teachers College, Columbia University, 1931.

[3] Edwin D. Snyder, "Factual versus Story Material." Unpublished Master's thesis, University of Pittsburgh, 1928. Abstract in *University of Pittsburgh School of Education Journal*, IV (March–April, 1929), 94–96.

what children at the lower grade levels are capable of doing. It is possible also that the verbal type of instruction, common in the elementary school and above, is entirely unsuited to the vast majority of children.

The type of material on which greatest reliance has been commonly placed is the narrative. The narrative, with its time sequence, its action, its dialogue, is an age-old form of discourse, a love for which runs back into prehistoric time. The love for narrative is deeply imbedded in the human heart; yet even a casual examination of life-activities shows that exposition, description, and argumentation also have their places and that the child hears explanations, descriptions, and arguments long before he enters school. Still, by and large, reading narratives is about as far as many readers ever go. A large part of the population read little or nothing else, as numerous surveys show. This fact raises the question of how complex the thinking of the average reader may become and whether the school is not foolishly trying to develop ability to think among those who will never think much and to make scholars out of those who have no aptitude for scholarship. Studies such as Cooper's on the reading habits of a thousand men[1] and Gray and Munroe's investigation of the reading of adults[2] are not encouraging. The fact remains, however, that the school continues the attempt to teach pupils to read books containing mainly expository matter. The school seems committed to this practice, if it is ever to educate citizens for a democracy, unless it abandons the idea of teaching through books and begins to teach orally, by radio or other mechanical sound-reproduction apparatus, or begins to teach mainly through living and learning directly from life-activities.

RESPONSIBILITY OF THE SCHOOL FOR TEACHING READING AND STUDY HABITS

The improvement of reading and study habits is manifestly a school problem, since few persons ever develop the study habit un-

[1] Elizabeth Eathel Cooper, "An Investigation of the Reading Interests of 1,000 Adult Occupational Workers." Unpublished Doctor's thesis, University of Pittsburgh, 1931.

[2] William S. Gray and Ruth Munroe, *The Reading Interests and Habits of Adults*. New York: Macmillan Co., 1929.

less they do so in school. As the writer sees it, the school has three functions: (1) to train the future citizen in those social attitudes, informations, habits, and skills which will make him a good citizen; (2) to make as many persons as possible into thoughtful students of life so that there may be numbers of citizens who read thoughtfully, look between the lines, and challenge sharply what they read; and (3) to turn out a few scholars or creative workers in the discovery of new knowledge. Up to the present time the creative workers have often received little aid from the school. As yet the school has not distinguished these functions clearly and has failed to carry out any of them effectively.

The minimum that the school should attempt in teaching reading for practical purposes is to train the girl to read recipes, follow patterns, and do other types of practical reading requiring accuracy of understanding and to give the boy practice in reading announcements and directions, in interpreting working plans and other data needed in the practical work of the world. The writer estimates that the average unskilled worker in a steel mill, for instance, in order to avoid dangers and to do his work, should be able to read at least at the level of the third-grade child. For persons who work with their hands, therefore, we shall probably have to be content with practical kinds of reading at this level. Such people will get their entertainment in other ways than in solitary silent reading.

However, the writer believes that much more can be done to train persons above the lower quartile in intelligence to read thoughtfully for many practical purposes other than the common purpose of amusement; and it is here that he thinks the school has really begun to make progress. The school may go as far as it likes in attempting to make students of the pupils in the upper quartile of intelligence. So far, these persons have largely been left to their own ingenuity in developing effective habits of work.

The problem of the school is, then, to face the fact that one of the chief purposes of teaching how to read and to study is to develop the habits essential for successful performance of these functions rather than to teach facts about any given subject, to develop interests and abilities in fields rather than to attempt factual mastery of these fields. The school cannot teach reading merely as a recreatory

activity and then expect the child to transfer his interest in narrative to the factual reading that is characteristic of many kinds of study. On the other hand, interest in study and in the development of study habits cannot be developed by punitive methods.

BASIC PROBLEMS IN TEACHING PUPILS TO STUDY

There are several problems of a basic character that must be solved if pupils are to study successfully.

1. Thorough investigation must be made of the attitudes, interests, motives, and purposes that may be utilized to induce the child to engage in the study type of reading. Save for history, biography, travel, and fiction, with their narrative structure, little ready-made material for this purpose is available to the vast majority of pupils except that which is found in the textbooks—and teachers are coming to have grave doubts that they have the right materials there.

2. Scientific investigation must determine what types of study procedures and what types of information concerning study and study materials can be developed with pupils at each age level and whether it is economical to try to develop such work habits and interests below the high-school level.

3. Thorough analyses, more thorough than any yet made, must be made of the skills and abilities required for different kinds of reading of the work type. It seems evident that there are basic abilities that are used in practically all study of the reading type but that there are also specific abilities needed in each special field. The ability to interpret maps, graphs, and tables, which is needed in the study of geography, is an illustration of one of these special types of ability. Since, as the writer believes, the patterns of thinking required in different fields differ in many ways, it is necessary to teach the child specifically how to think in each of the special fields, or at least how to utilize the material of the field in thinking. The skills and the abilities needed in study group themselves, in the writer's judgment, under the heads of observation, reading, thinking, language, and construction. A thorough analysis of these skills will furnish a master checking list for the use of curriculum workers and the writers of books, as well as for the use of teachers in the analysis of the causes for their pupils' failures.

4. Investigation must also be made of the study habits and the integrated habit patterns that are of specific value in study. Ways and means must then be devised of training pupils in the effective development of these habits and habit patterns in order that the mind in study may be free to think. Many pupils fail in study today because they have never learned to persevere, to concentrate on the task in hand, to prepare a report on some topic investigated, to read selectively for specific purposes of various kinds, and to enjoy the habit of reading to learn. The types of behavior which are effective in study must be learned economically. It is a frightful waste of a pupil's time to fail to aid him in the development of these habits, but a large number of schools fail at this point.

PRACTICAL MEASURES FOR DEVELOPING STUDY HABITS

Research workers must join with teachers in the study of children's reading and study habits. The classroom is a laboratory in which many of the problems must be worked out. In the meantime, what are the practical measures which may be taken by supervisors and teachers to help pupils to develop good habits of study? In the remainder of this article an attempt will be made to suggest ways in which the problem may be attacked. These suggestions will not be supported by research reference in this article although most of them have ample data back of them.

It is most important that the teacher give attention to the development of specific purposes in all reading of the study type. In recreatory reading this emphasis is not essential since material of this type is ordinarily read for its own sake. Many kinds of material read for study purposes are undeniably interesting and enjoyable in themselves, but it is characteristic of study that the reader is generally reading for a purpose of some kind which the material is to serve. When a person reads a poem or a story, he does not expect to make specific use of the material save to enjoy it. Sometimes he reads history for the same purpose, but the study of history is designed to develop understandings of a type that will be useful in life, such, for instance, as trying to understand the reason for the present interest in old-age pensions and unemployment insurance. Numerous studies have clearly shown that, when pupils read for

specific purposes, they read more effectively. The teacher must discover what specific purposes are usable by children at each age level and in each unit of study.

A great deal can be done to improve reading and study habits by the selection of subject matter. The teacher may avoid those aspects of a subject which are too abstract and are suitable only for adults and may seek for those aspects which are likely to interest children. She must constantly connect what is read with what is known and what has been experienced. It is obvious that the curriculum is still full of many things which fail to affect children because adults have made bad guesses about what children can understand and use. A sure way to make Jack a dull boy is to force him to study about things which have no meaning for him. A great deal of this unnecessary forcing is, of course, avoided when subjects are approached from the problematic point of view or as means of helping the pupil to understand life better. Even where advanced curriculum practices are absent, much can be done by the intelligent teacher to avoid drowning the child's interest in history, geography, and science by forcing the pupil beyond his depth.

There is also a certain technical aspect to the problem of improving reading and study habits, which was suggested earlier in this paper. The teacher who would teach children how to read for study purposes must analyze each group of children as they appear and attempt to discover what abilities they have and what they lack. The writer has in his possession such an analysis made by a classroom teacher. It consists in a record of a careful thinking-through of the attitudes, information, skills, and habits which her pupils seemed to possess or to lack. This analysis was followed by a careful remedial program, which was successful in developing many abilities that were weak and in utilizing those that were strong. This type of thinking is fruitful in giving the teacher a better understanding of the study process. It is comparable to the diagnosis which the able physician makes of his patients.

It is necessary, too, to attempt to interest the pupils in the effectiveness of their own reading and study activities. While study activities are complex, certain of the simpler aspects of study may be brought up when the child is young. He may often show a surpris-

ing insight into his own problems and may learn to work more intelligently if his errors are pointed out to him and he sees the reason for better ways of studying. This procedure is commonly followed in arithmetic when, for instance, a child is shown that adding up and then down is a good method of checking the addition of a long column. In studying geography, the child may well learn that indiscriminate reading is not the best way to master a lesson.

When a teacher has become familiar enough with her pupils to know their interests, powers, capacities, and deficiencies, she must then organize a program of studies which will be both constructive and remedial in character. This program must be constructive because in the long run a purely remedial program would be more or less deadening. There must be an interest in pushing forward as well as in overcoming some of the shortcomings that have appeared in previous work. Each pupil must be made aware of what he needs to do to overcome those practices in which he is ineffective, but at the same time he should have a consuming interest in reading about new subjects and gathering new data for various purposes. Fortunately, many study habits can be learned just as effectively in going forward as in doing over again what has been done before.

If interest in study is to be attained, differentiation of study activities must be provided for. This provision, unfortunately, is not commonly made. The many experiments in directing study have had for their aim the differentiation of instruction in various ways. The great trouble with the early experiments in directing study was found in their major premise that the curriculum as set up must be mastered and that the main problem in directing study was to devise a way of providing for individual differences in rate of learning. The problem is deeper than that. If children are ever to read history, for instance, with any satisfaction, they must have purposes or motives. The absence of purpose, except the extrinsic one of pleasing the parent and the teacher or of getting a high mark, makes the reading of history a dull affair. The remedy would seem to be either to organize history for schools in a manner calculated to arouse the interest of pupils in history itself or to set up motives so vividly meaningful in themselves that pupils will swallow the bitter pill of history in the attempt to satisfy their purposes. A better way

would seem to be to select for the schools those aspects of history which are found to be interesting to children and then to discover the method of organization of these aspects of history which will correspond with the laws of learning as they are known to operate in children. This problem suggests the need for extensive research.

Unfortunately, the busy teacher seems to have to take the material in history, geography, science, and other subjects as it comes. She rarely has the time, the training, or the materials to conduct her teaching of a subject experimentally and to find out those aspects of the subject which appeal to her pupils and those types of materials which the pupils are able to read with some degree of comprehension. It is well known that many pupils are incapable of reading with understanding many of the textbooks which they are asked to study. Not infrequently teachers are forced to teach orally the material which the textbook contains but which the pupils cannot read. It is possible, of course, that American schools have depended entirely too much on the textbook and that a remedy lies in the direction of adopting the European method of oral instruction. This change would, however, require a revolution in methods of teacher training in this country, which does not seem imminent. Many of us cannot escape the belief that the method of directed study and of developing the habits of reading necessary for effective study is, in the long run, the more promising way.

Another practical measure which may be taken by teachers to improve reading and study habits is to give pupils systematic practice in the formation of the definite abilities that are known to be necessary in the study type of reading, such as finding the main points of paragraphs, finding the supporting details, outlining, reproducing ideas, summarizing, preparing oral reports, and preparing written reports. Fortunately, pupils are now being trained in many of these necessary abilities. Textbooks are coming to include practice exercises calculated to develop the pupils' powers to assimilate and retain the ideas gained from informational reading. Workbooks with copious exercise material for this purpose are available. Such materials should be used intelligently to give pupils practice in those abilities in which they show weakness, but the materials should also be used constructively to give practice in the develop-

ment of specific skills and habits. Always such materials should be used as a result of needs shown by study rather than as isolated drills. Just as the skilled physician applies remedies for known defects and prescribes modes of prevention, so the teacher must watch the development of each group of children and provide skilfully for their growth in desirable attitudes, habits, and skills. Practice materials are useful tools which serve the teacher in her attempts to reach these larger purposes, not merely materials to be used for their own sake.

If children are to develop reading and study habits that will definitely function in improving their ability to assimilate ideas, teachers must teach the pupils how to study each subject. The teachers must be as interested in the growth of study habits and the ability to read intelligently the materials of their special fields as in the children's grasp of ideas in those fields. The writer believes that this idea is not widely spread among teachers. Teachers of reading are now coming to accept responsibility for developing the abilities needed in the work or study type of reading, but by far the larger number of teachers of subject matter are still teaching as if they had no responsibility for the reading of the material in their subject fields. The writer has come to believe that, unless a teacher is aware that she is, to a large extent, merely a director of the reading of the material in her field, she is not a good teacher. The obvious remedy is to require all those who teach to become master readers and to know thoroughly the literature on reading and study.

The crux of the whole matter of improving reading and study habits is, then, the necessity for the teacher to realize that reading and study must become vital experiences in the lives of children. Teachers must be much more interested in the study process than they have been; they must understand more clearly how complex a thing study is; and they must get a clearer idea of the abilities needed for successful study. They must come to regard themselves as directors of the study process. They must be as interested in the development and the improvement of study habits as in the imparting of knowledge to children. They must learn that, unless pupils form the habit of reading and studying, they have missed a large part of the purpose of education.

ACHIEVEMENTS OF PUPILS WHO HAVE HAD DOUBLE PROMOTIONS IN ELEMENTARY SCHOOL

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Both teachers and parents are frequently presented with the problem of double promotions for pupils of unusual ability in elementary school. A number of factors must be taken into consideration in determining on a policy of acceleration. Teachers often think only in terms of ability to do school work, but parents are vitally interested in the possible social and vocational results of acceleration as well as in the educational results. In a previous study made by the writer[1] 46 pupils who had been accelerated from one to three semesters in elementary school were compared on the basis of high-school marks with the 110 remaining members of their high-school graduating class. It was found that the accelerated pupils made better marks in high school than their non-accelerated classmates. The pupils of the previous study were graduated from the Michigan City, Indiana, elementary schools in the first and the second semesters of the school year 1925–26.

The study reported in this article was made in the spring of 1935, five years after the previous study. It is an attempt to compare the educational, vocational, and social achievements of the same persons. Since none of the subjects had been accelerated more than three semesters, they could not be considered precocious. The school officials had simply made some attempt to adapt the educational program to their superior abilities.

In the present study it was necessary to use the questionnaire technique. A careful check with the city directory and the telephone book and by means of local inquiries produced addresses for 140 of the 156 graduates. Seventy-five replies to the questionnaire were re-

[1] T. L. Engle, "A Study of the Scholastic Achievements in High School of Pupils Who Have Had Double Promotions in Elementary School," *Elementary School Journal*, XXXI (October, 1930), 132–35.

ceived, twenty-five (twelve boys and thirteen girls) from the accelerated group and fifty (twenty-six boys and twenty-four girls) from the non-accelerated group. While the number of cases is too small to give conclusive data, the general trend of the results is interesting.

EDUCATIONAL AND VOCATIONAL ACHIEVEMENTS

College marks were not available for the present study, but some measures of later educational achievement were obtained from the questionnaire. The data in Table I indicate that more non-accelerated than accelerated girls received additional educational training of some kind. A larger percentage of accelerated than of non-accelerated boys received additional educational training. When both boys and girls are considered, the percentage of accelerated pupils who attended college was larger than the percentage of non-accelerated pupils, and the average length of college attendance was greater for the accelerated group. The percentage of the non-accelerated group who received additional training other than college training was greater than the corresponding percentage of the accelerated group. For both types of training (college and non-college combined) the non-accelerated group had the slightly larger percentage. The number of honors received in college would suggest that the accelerated pupils continued to be superior in educational achievement.

A period of five years following high-school graduation is too short a time to indicate permanent vocational success, and in such economically abnormal days as these a person's achievements in that time probably are even less reliable than usual. Some of the subjects were still in college, some of the girls were married and not engaged in gainful occupations, and some members of the groups were in occupations in which financial achievement could not be measured definitely. Sixteen of the accelerated group and twenty-eight of the non-accelerated group were able to give definite salary figures. The percentages of accelerated boys and girls who were employed were higher than the corresponding percentages of non-accelerated pupils. The non-accelerated group received a median salary slightly higher than the accelerated group. However, the accelerated boys were making higher median salaries than the non-accelerated boys. The opposite was true for the girls, but the difference in the case of the girls was small. The minimum salary and the maximum salary of

the accelerated group were higher than the minimum and the maximum salaries of the non-accelerated group.

TABLE I

EDUCATIONAL AND VOCATIONAL RECORDS FIVE YEARS AFTER HIGH-SCHOOL GRADUATION OF 25 PERSONS WHO HAD AND 50 PERSONS WHO HAD NOT BEEN ACCELERATED IN ELEMENTARY SCHOOL

GROUP	BOYS		GIRLS		BOTH	
	Number	Per Cent	Number	Per Cent	Number	Per Cent
Additional training after high school other than college (art, business college, etc.):						
Accelerated	6	50	3	23	9	36
Non-accelerated	7	27	14	58	21	42
Attended college (for any time):						
Accelerated	8	67	4	31	12	48
Non-accelerated	12	46	8	33	20	40
Additional training (college, other than college, or both):						
Accelerated	10	83	6	46	16	64
Non-accelerated	17	65	18	75	35	70
Average number of months attended college:						
Accelerated	24.9	....	29.3	....	26.3	....
Non-accelerated	28.5	....	21.8	....	25.8	....
Graduated from college or still attending:						
Accelerated	4	50	3	75	7	58
Non-accelerated	9	75	3	38	12	60
Average number of honors received in college (Phi Beta Kappa, etc.):						
Accelerated	1.3	....	2.5	....	1.7	....
Non-accelerated	0.8	....	1.0	....	0.9	....
Graduates gainfully employed or attending school, and married girls:						
Accelerated	10	83	11	85	21	84
Non-accelerated	20	77	18	75	38	76
Weekly salary range:						
Accelerated (16 replies)	$12.00 to $125.00	....	$10.00 to $29.75	....	$10.00 to $125.00	....
Non-accelerated (28 replies)	$7.50 to $60.00	....	$10.00 to $29.16	....	$7.50 to $60.00	....
Median weekly salary:						
Accelerated (16 replies)	$23.75	....	$15.90	....	$17.25	....
Non-accelerated (28 replies)	$18.00	....	$17.00	....	$17.50	....

SOCIAL ACHIEVEMENTS

It is always difficult to measure social achievements, but some objective data were secured and are summarized in Table II. The ac-

TABLE II

SOCIAL ACHIEVEMENTS FIVE YEARS AFTER HIGH-SCHOOL GRADUATION OF 25 PERSONS WHO HAD AND 50 PERSONS WHO HAD NOT BEEN ACCELERATED IN ELEMENTARY SCHOOL

GROUP	BOYS		GIRLS		BOTH	
	Number	Per Cent	Number	Per Cent	Number	Per Cent
Married:						
Accelerated	1	8	4	31	5	20
Non-accelerated	4	15	6	25	10	20
Average number of social groups in which membership was held:						
Accelerated	1.92	.....	2.54	.....	2.24	.....
Non-accelerated	1.81	.....	2.17	.....	1.98	.....
Average number of offices held in such groups (each term counted separately):						
Accelerated	0.58	.....	1.85	.....	1.24	.....
Non-accelerated	1.54	.....	1.50	.....	1.52	.....
Members of social fraternity or sorority at college:*						
Accelerated	6	75	3	100	9	82
Non-accelerated	6	55	3	60	9	56
Average number of social groups at college in which membership was held (Y.M.C.A., dramatic clubs, etc.):						
Accelerated	0.88	.....	5.00	.....	2.24	.....
Non-accelerated	1.33	.....	3.00	.....	1.95	.....
Average number of offices held in college in fraternities, clubs, classes, etc. (each term counted separately):						
Accelerated	0.88	.....	3.25	.....	1.67	.....
Non-accelerated	0.33	.....	1.87	.....	0.89	.....
Average number of non-athletic extra-curriculum activities engaged in at college:						
Accelerated	0.88	.....	4.75	.....	2.17	.....
Non-accelerated	1.25	.....	1.57	.....	1.37	.....
Average number of college extra-mural athletics engaged in:						
Accelerated	0.38	.....	0.25	.....	0.33	.....
Non-accelerated	1.42	.....	0.00	.....	0.90	.....
Average number of college intra-mural athletics engaged in:						
Accelerated	1.00	.....	2.50	.....	1.17	.....
Non-accelerated	1.67	.....	1.71	.....	1.69	.....
Engaged in either or both types of athletics:						
Accelerated	5	63	2	50	7	58
Non-accelerated	10	83	4	57	14	74

* One accelerated girl, three non-accelerated girls, and one non-accelerated boy attended colleges having no fraternities or sororities.

celerated boys belonged to more non-college social organizations than did the non-accelerated boys, but the former held fewer offices in the organizations. The accelerated girls belonged to more non-college social organizations and held more offices in these organizations than did the non-accelerated girls. Of those who attended college, the percentages of accelerated boys and girls who belonged to social fraternities and sororities were larger than the percentages of non-accelerated boys and girls. The accelerated boys at college belonged to fewer social groups other than fraternities than did the non-accelerated boys, but the accelerated boys held more offices in the organizations to which they belonged. The accelerated girls at college belonged to more social organizations other than sororities and held more offices in the organizations than the non-accelerated girls. The number of non-athletic extra-curriculum activities participated in by the accelerated boys was smaller than the number participated in by the non-accelerated boys, while the opposite relation was found for the girls. Accelerated boys participated less in both varsity and intramural athletics than did the non-accelerated boys, but the opposite was true for girls.

In summary, then, the accelerated subjects belonged to more social organizations than the non-accelerated subjects. The accelerated boys attending college were not so active socially and in athletics as were the non-accelerated boys, but the accelerated girls were more active than the non-accelerated girls in both these activities.

GENERAL CONCLUSIONS

The data of this study are, of course, too limited to warrant any but the most tentative conclusions. If any conclusions can be drawn from such a limited number of cases, the evidence indicates that some acceleration in elementary school does not handicap a person educationally, vocationally, or socially. However, care should be taken to urge accelerated girls to continue with their superior achievements (considered as further training either in college or in other types of instruction). Accelerated boys, especially those who are going to college, should be encouraged to develop the social sides of their personalities.

A QUICK MEANS FOR DETERMINING A PUPIL'S AGE AT ANY GIVEN DATE

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Teachers and administrators sometimes find it difficult to determine a pupil's age at a given fixed date. Whenever it is necessary to find an intelligence quotient from an intelligence test, a pupil's chronological age must be found to the nearest month. In order to facilitate the computation of chronological age, the writer constructed Table I.

If an intelligence test was given in 1935 between September 1 and 15, inclusive, then the pupil's chronological age can be read from the table. If his birthday is between January and September, the left side of the table is used; if his birthday is between October and December, inclusive, the right side of the table is used. To illustrate, consider the case of a pupil born March 12, 1926. On the left side of the table the row for the birth year of 1926 is found, and the age in years is given in the next column as nine. Following the same row to the month of March, we find the month number is six. Therefore, the pupil is nine years and six months of age. If a pupil was born on November 3, 1926, his age would be determined by going to the birth year of 1926 on the right side of the table and then reading the corresponding age in years for this birth year, namely, eight. Then, following the birth year to the column headed November, we find the age in months is ten. Thus, the pupil's age is eight years and ten months.

If a birthday falls on the sixteenth day of a month or later, the next month is considered the birth month. For example, when a pupil's birthday falls on April 20, the month of May is used in computing the child's age. Therefore, the table gives the chronological age of a pupil to the nearest half-month. This degree of accuracy is as great as is needed for most school records.

A similar table can be constructed to give the age at any given

TABLE I

TABLE FOR DETERMINING A PUPIL'S CHRONOLOGICAL AGE IN SEPTEMBER, 1935

YEAR OF BIRTH	AGE IN YEARS	AGE IN MONTHS IN—												AGE IN YEARS	YEAR OF BIRTH
		January	February	March	April	May	June	July	August	September	October	November	December		
1935	0	8	7	6	5	4	3	2	1	0	.....	.....	.....	.....	.....
1934	1	8	7	6	5	4	3	2	1	0	11	10	9	0	1934
1933	2	8	7	6	5	4	3	2	1	0	11	10	9	1	1933
1932	3	8	7	6	5	4	3	2	1	0	11	10	9	2	1932
1931	4	8	7	6	5	4	3	2	1	0	11	10	9	3	1931
1930	5	8	7	6	5	4	3	2	1	0	11	10	9	4	1930
1929	6	8	7	6	5	4	3	2	1	0	11	10	9	5	1929
1928	7	8	7	6	5	4	3	2	1	0	11	10	9	6	1928
1927	8	8	7	6	5	4	3	2	1	0	11	10	9	7	1927
1926	9	8	7	6	5	4	3	2	1	0	11	10	9	8	1926
1925	10	8	7	6	5	4	3	2	1	0	11	10	9	9	1925

date. Suppose a test were given between April 1 and 16, then April would correspond to September in Table I. March would then be the first month, February the second month, and January the third month. Furthermore, May would be the eleventh month, June the tenth month, and each succeeding month would decrease one in value until December, which would be the fourth month. The column showing the year of birth can be extended indefinitely, but, of course, no advantage is derived from extending this column beyond the birth year of the oldest pupil in the group considered.

Such a table is advantageous because it is extremely easy to construct and to read and because it gives accurately the chronological age of a pupil to the nearest half-month.

HEALTH SERVICES RENDERED BY SCHOOL PHYSICIANS AT THE UNIVERSITY OF CHICAGO LABORATORY SCHOOLS

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Adequate health supervision of the pupils enrolled in the Laboratory Schools of the University of Chicago is secured by the employment of two physicians on a full-time basis. In general, the woman physician has charge of the girls, and the man physician takes care of the boys. This sex division is adhered to strictly in the case of physical examinations. However, physical examinations comprise only one phase of the school health service, and there is of necessity some overlapping in the care of the pupils. The importance of considering other than the purely physical aspects in a medical appraisal of an individual is gaining increasing recognition by the medical profession and is particularly applicable to school health work.

MEDICAL HISTORY

From the educational and from the medical standpoint, a medical history is of great significance, particularly in the case of young pupils. Information elicited in the family, data concerning a child's birth and development, and health components of the medical history may be of decided import. A history of the child's eating, sleeping, and activity habits aids in evaluating daily routine. Social and emotional difficulties may be indicated by a history of habits like thumb-sucking, nail-biting, bed-wetting, etc. Upon a pupil's entrance into the school parents have been asked to fill in (1) a detailed medical-history form, (2) a form giving a record of diseases, and (3) a lengthy form entitled "Social and Educational Survey and Items of Family History." Antagonism (perhaps justified) on the part of parents toward a multiplicity of forms and duplication of data frequently resulted in failure to supply the desired information. At present attempts are being made to condense these three forms into a single form without sacrificing thoroughness.

The medical history obtained at the time of the pupil's entrance into the school is supplemented annually by an interim history, for which a special form is utilized. This form is mailed to parents before school opens in the autumn. The pupil brings the filled-in form when he appears for his preliminary examination in accordance with a time schedule printed on the blank.

PRELIMINARY EXAMINATION

Preliminary examinations are made on Thursday, Friday, and Saturday before the Monday on which school opens. Despite the fact that two physicians (a woman and a man) assist the regularly employed physicians, the time that can be given to these examinations is sharply limited. In order that the physicians' time may be conserved and the examination expedited, a definite routine (separate but similar for boys and girls) is followed. Before reaching the physician, a pupil passes through several stations manned by physical-education instructors. Additional personnel (high-school pupils) function between stations to assist pupils and to avoid confusion. At the first station the pupil is given a number (which determines his order of appearance at subsequent stations), and his "Entrance Inspection and Examination" form, which he then carries with him, is filled in with respect to his vaccination record. At subsequent stations the pupil's height and weight and certain facts with regard to the condition of his eyes are recorded. The examining physician enters his findings with respect to the pupil's nutrition and the condition of his heart, teeth, throat, spine, feet, and general health; makes recommendations with respect to physical activity or restrictions; indicates whether a re-examination is necessary and the date on which the re-examination should be held; and notes any other recommendations he may care to make. Finally, the forms are collected and checked for completeness by the secretary of the physicians' office.

The primary purpose of the preliminary examination is to determine, on the basis of the history and the physical findings, whether a pupil may enter school without detriment to his own health or to that of his fellow-pupils. While in most instances the annual-history form yields sufficient information, additional inquiry may be neces-

sary. If the pupil in question is a former pupil, his permanent records can be consulted readily. Although part-time school work is sometimes advisable, in practically no instance is the physical status so poor as to interdict school work entirely. Neither is it at all common to encounter a contagious disease of such a nature as to necessitate excluding the pupil from school.

Although conditions which interdict school attendance are only rarely observed, the doctors frequently find physical defects which may be of importance from the standpoint of education in general or which may require a restriction of the pupil's physical-education program. During the first week of school the records of the preliminary examinations are carefully checked for conditions of this kind. All physical defects are reported to the principals of the Elementary School and the High School, and conditions which necessitate restriction of physical activity are reported to the department of physical education.

ANNUAL, OR BIRTHDAY, EXAMINATION

Although the preliminary examination serves a useful purpose, lack of time makes it impossible to secure as detailed an examination as is desirable for a complete appraisal of a pupil's physical status. This appraisal is made by a thorough annual examination. Pupils are scheduled for examinations a week in advance, and copies of the schedules are supplied to teachers. Parents of young children are notified by letter of the date and the hour of the examination and are invited to be present. The presence of a parent or someone directly concerned with the care of the child is reassuring to the young pupil, and an opportunity is afforded for discussion of matters pertaining to the pupil's health. The hour allotted for the examination allows ample time, not only for a thorough physical examination, but also for questions on the part of parent, pupil, or examiner and for discussion of health matters. The pupil's complete medical record is at hand at the time of the examination.

The annual examination, also called the "birthday examination," is made on the pupil's birthday, as nearly as possible. Pupils whose birthdays fall during the summer months are examined at the half-year, during the winter months. Through the annual examinations

a systematic collection of data about individual pupils and groups of pupils is made. The desirability of such data for statistical and research purposes, particularly with respect to anthropometric or growth factors, is, of course, obvious.

Anthropometric measurements, which comprise the first part of the annual examination, are recorded on a separate sheet and are then transcribed to a master card, which contains a complete record of the pupil's yearly examinations. All measurements are made on the metric scale and are then translated to the English scale and so entered on the master card. The following exceptions may, however, be mentioned: weight is measured in pounds, height in inches, lung capacity in cubic inches, and hand squeeze in pounds.

While the measurements are listed on the form in a more or less anatomical sequence, the writer has found it expeditious to make at one time all measurements that are to be taken with one instrument. Thus, after weight, standing height, sitting height, and span of arms have been determined, the length of the forearms and of the lower legs, the iliac and the bitrochanteric widths, the chest width, and the shoulder width are determined with sliding calipers; the depth of the chest and the head width and length are determined by a compass (pelvimeter); and the various girths (head, neck, chest, abdominal, and hip) are measured with a steel tape. Separate instruments are used to determine head height, hand squeeze, and lung capacity.

The anthropometric portion of the annual examination serves chiefly for studies made by the Department of Child Development, but it may occasionally be of clinical significance. For instance, inequality in leg length may be responsible for scoliosis and for tilting of the pelvis. The purpose of the medical portion of the examination is to promote the physical well-being of the pupil and indirectly to promote his education. Despite the excellent medical supervision which most of the pupils enjoy outside the school, slight physical defects are discovered in about half the pupils. Such defects may constitute an actual or a potential threat to health and a definite educational handicap, for it is generally recognized that the maximum educational result is possible only when health is optimum.

To be of the greatest educational value, knowledge of a pupil's physical status should be in the possession of, or readily accessible

to, the persons concerned with his education. For this purpose the reports of the physical examination are made in triplicate, one copy for the principal's office, one for the physical-education instructor, and one for permanent filing with the pupil's record. Reports on the Elementary School pupils are made on a lengthy form containing practically all the items of the medical examination plus the medical-history items. For reports on High School pupils this form has been replaced, with the assent of the High School principal, by a much simpler form, on which are recorded positive findings, comments, and recommendations.

While the knowledge of physical defects is important, the correction of difficulties, if possible, is even more important. The responsibility for the correction of defects rests mainly with the parents. If a parent accompanies the pupil at the examination, the results of the examination are discussed, and, if indicated, recommendations are made. Occasionally recommendations are made to a high-schoo pupil. If recommendations are made to the parent or the pupil, the fact is noted in the report of the examination. If recommendations are indicated by the report but have not been made to parent or pupil, the principal sends a statement concerning findings and recommendations to the pupil's home.

SPECIAL EXAMINATIONS

Special examinations are made whenever a need for them is indicated. The entrance or the birthday examination may reveal conditions that call for follow-up examinations, single or repeated, over varying periods of time. A pupil may be referred for a special examination by the principal or by a teacher because of an apparently abnormal physical condition or because of a possible physical basis for an educational or a behavior problem. Occasionally a special examination is requested by a parent. The results of a special examination are recorded on a special blank, which is filed with the pupil's permanent record. If the nature of the examination requires it, a report may be made to the principal's office. Occasionally a pupil is referred to his physician for further examination or treatment.

A type of special examination which is almost a routine matter is the heart examination given Junior and Senior boys in the High

School who engage in strenuous competitive sports, such as swimming, basketball, and track. These examinations are considered desirable because of the vulnerability during puberty and adolescence. Other types of special examinations relate to first aid, restrictions in physical activity, restrictions in the use of the swimming pool and shower baths, and contagious-disease control.

FIRST AID

Although the school physicians may be called on to render first aid of any type, this service is limited almost entirely to the care of injuries. Numerous injuries, mostly of a minor character, are cared for daily. Supplies for the care of injuries, such as lacerations, sprains, strains, bruises, blisters, splinters, and ocular foreign bodies, are kept in the physicians' office. If an injury is at all serious, necessary first aid is given and the pupil's parents are advised to have a physician of their own choice render further care. Whenever warranted by the nature of an injury, antitetanus serum is recommended. A report of a severe injury is made to the principal on a special form. A severe injury may necessitate restriction of a pupil's physical activity.

RESTRICTIONS OF PHYSICAL ACTIVITY

There are various health conditions which may lead to restriction of physical activity. All restrictions of physical activity for reasons of health are decided on by the school physicians. Such a restriction may be complete or partial with regard to degree, and temporary, semi-permanent, or permanent with regard to time.

Many excuses from activity for a single day or for several days are granted daily. On readmission after an illness pupils, especially young pupils, are excused from physical activities for one day or for several days almost as a matter of routine.

If there is objective evidence of illness, decision on the advisability of restriction is usually not difficult. If, on the other hand, a pupil's complaint is subjective, it may be difficult of evaluation. Although some pupils are, no doubt, excused unnecessarily, malingering is discouraged in several ways. When the condition for which a pupil seeks an excuse is apparently of little or no significance, he is sent to physical-education class for full activity, modified activity, or to watch activity. If a pupil is sent home, his home is notified by tele-

phone of his coming. In this way truancy is practically obviated. A pupil who seeks excuses repeatedly may be advised to consult his physician regarding his complaints.

Restrictions covering an extended period of time are less likely to entail malingering than are those of short duration. Parents' requests for restriction of pupils' activities are usually complied with readily. In case the basis for a restriction requested by the parents seems unreasonable, they are asked to procure a physician's statement regarding the pupil's disability with a recommendation for restriction. In an exceptional case a physician may cater to the wishes of a pupil or his parents, or the doctor's opinion may be at variance with that of the school physicians. Nevertheless, his recommendations are usually honored. The opinion of an outside physician may be very valuable in reaching a decision on the necessity of restriction of physical activity. His knowledge regarding illnesses, like nephritis, diabetes, tuberculosis, blood dyscrasias, sinusitis, etc., or regarding injuries or surgical operations is usually more complete than that to be gained from a medical-history blank. Susceptibilities to upper respiratory infections, asthma, and hay fever also may be best known to a pupil's physician.

In addition to abnormal conditions revealed by a pupil's history, defects disclosed at any examination may constitute the basis for restriction of physical activity. If the disability is orthopedic in nature, it may be possible, in co-operation with the pupil's physician or orthopedist, to arrange a special program involving individual attention. Non-orthopedic conditions, such as heart disease, hernia, and injury, may necessitate restriction in varying degrees.

Undernutrition is a physical defect which cannot be regarded as a disease entity and which does not ordinarily interfere with physical activity but which may, nevertheless, make complete or partial restriction highly desirable. The young hyperkinetic child must be kept from excessive expenditure of physical and nervous energy. Later in childhood the rapid-growth period which begins shortly before puberty may give rise to a rather marked degree of undernutrition and render restriction of activity imperative. Because of reluctance on the part of many boys to give up gymnastic activity, a compromise on limitation of activity is often necessary to avoid an

unfavorable emotional reaction which might in turn influence nutrition unfavorably and thus defeat the purpose of the restriction.

RESTRICTIONS IN THE USE OF THE SWIMMING POOL AND SHOWER BATHS

While swimming may be contra-indicated as a physical activity, restrictions in the use of the swimming pool and shower baths may also serve for the protection of pupils other than those restricted. Restrictions relating to the use of shower baths are almost exclusively of the latter type. All pupils with conditions which might lead to pollution of the water are excluded from the swimming pool. Such conditions may be disorders like otitis media and conjunctivitis, or they may be skin disorders like furuncles, impetigo, and other forms of pyodermia.

All contagious skin disorders also preclude admission to the swimming pool and shower baths. Ringworm (or suspicion of ringworm) is perhaps the most common reason for exclusion. Though only mildly contagious, plantar and palmar warts are also causes of exclusion from the swimming pool and the shower baths. Weekly inspections for skin disorders are made by physical-education instructors, and suspicious cases are referred to the school physicians. A record is kept in the physicians' office of pupils who are excluded, and the pupils are not permitted to resume use of the swimming pool and showers until they receive permission from the school physician.

CONTROL OF COMMUNICABLE DISEASES

Inasmuch as immunity to communicable diseases is of prime importance in their control, furtherance of artificial immunity (resulting from vaccination or inoculation) is desirable. Immunity to smallpox is required of all pupils, who must present certificates of vaccination from their own physicians. In case certification by a pupil's physician is very inconvenient or impossible and the pupil possesses a satisfactory vaccination scar, the certificate may be filled in by the school physician. Although smallpox is the only disease for which immunity is mandatory, immunization to other diseases is encouraged and is common practice, especially among the Elementary School pupils. Practically all young children in the school have been immunized against diphtheria or have been found to be immune by

means of the Schick test. Immunization to scarlet fever and whooping cough is probably commensurate with the patronage which these immunizations can command at the present time.

Notwithstanding the favorable status of artificial immunization among the Laboratory School children, much remains to be desired, and measures for the control of communicable diseases are absolutely essential. Of particular importance in the control of communicable diseases is the common cold, not only because of its prevalence and communicability per se, but also because of the fact that symptoms characteristic of a cold may be precursory to specific communicable diseases. Successful control of cold symptoms should, to a large extent, solve the problem of communicable-disease control.

Effective control of communicable diseases implies early knowledge of their existence or of a child's exposure to them. For this purpose various procedures are employed. In view of the greater susceptibility to communicable disease among children of preschool age and because of the children's lack of knowledge regarding the importance of personal conduct in the prevention of the spread of communicable diseases, the kindergarten children are inspected every morning. Although this inspection assumes the formal aspect of a throat examination, each child is given a rapid survey for any signs of illness. Since symptoms like coughing, sneezing, nasal discharge, and lassitude may escape detection on momentary inspection, the teachers are relied on to refer for further examination pupils showing any abnormal signs or symptoms.

Although daily inspection of all pupils would consume too much of the time of pupils, teachers, and physicians, teachers are expected to be on the alert for signs or symptoms of illness and to refer all suspicious cases to the physicians.

The school telephones the home to ascertain the reason for every absence, and this procedure frequently yields information regarding communicable diseases. Telephone calls concerning pupils absent from the Elementary School are made from the school physicians' office; those concerning pupils from the High School are made from the principal's office. If a pupil is absent over an extended period of time, subsequent calls are made.

All Elementary School pupils and those High School pupils who

have been absent for reasons pertaining to health are readmitted to classes only after having procured from the school physician a readmittance slip. This procedure enables the physicians to exclude pupils who might otherwise return to school too soon after an illness and become the source of infection for others or, incidentally, pupils who might return too soon for their own welfare. Occasionally an undiagnosed case of communicable disease is discovered.

Duplicate monthly records of absences and readmissions involving the health of pupils are kept in the school physicians' office throughout the school year. One copy is supplied to the principal's office and another to the central records office.

Emphasis should be placed on the information which the parents can give to assist in early detection of communicable diseases. Most parents co-operate commendably in reporting cases of communicable disease in their children or their exposure to such diseases. Frequently parents report knowledge or suspicion of illness or exposure in other families. Such reports, as well as rumors from any other source, are always carefully investigated. Parents' questions are answered frankly, but gossip is discouraged.

If a room of pupils is exposed to a communicable disease, the group is not permitted to mix with other groups. Exposure is regarded as having taken place when one of the pupils develops signs or symptoms of a communicable disease within twenty-four hours after having been with other members of the group. All non-immune exposed pupils are inspected daily during the incubation period of the disease. Inspection lists are compiled readily from "Disease and Immunization Record" cards which are kept for all pupils. Parents of a group of pupils who have been exposed to a specific communicable disease at school are advised accordingly. At times the brevity of the incubation period of a communicable disease, such as scarlet fever, or late knowledge of exposure necessitates notification by telephone. Ordinarily, however, letters are sent to the parents.

ADVISORY SERVICE

Although the school physician has no direct jurisdiction over many aspects of school life that definitely concern the health of pupils, he must, nevertheless, act in the capacity of consultant and ad-

viser. Close co-operation between the school physician and persons directly concerned with the various phases of the pupils' school life is highly desirable. At times co-operation with the several departments of the school is essential. The school physician, for example, may be in a position to give advice on such matters as classroom seating and illumination, ventilation and heating, janitor service, toilet and washroom facilities, care of the swimming pool, and management and supervision of the lunchroom.

A further matter which may properly be considered an aspect of sanitation concerns the health of the school personnel, particularly of teachers, with whom pupils come into intimate contact. In view of the vulnerability of young children to tuberculosis, an annual health certification of the teachers, especially a careful chest examination of all Elementary School teachers, has been advocated by the school physicians.

EVALUATION OF TEXTBOOK MATERIALS IN HANDWRITING

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The selection of a basic textbook for state adoption is of such tremendous significance that a careful professional evaluation of all available textbook materials must be made prior to the adoption. Over a period of several years the California State Curriculum Commission has developed a procedure of textbook evaluation involving the following four major steps: (1) the development of a set of criteria by which the books may be judged; (2) the formulation of a score card based on the assignment of numerical values to the items of the criteria; (3) the completion of a series of studies, primarily objective in character, designed to secure data with respect to the relative merits of the books on all items of the criteria; and (4) the interpretation and utilization of these data in rating the books on the score card.[1]

The purpose of this article is to present a brief summary of the recent evaluation of textbook materials in handwriting for the elementary grades.

THE CRITERIA

The following criteria were formulated and used by the State Curriculum Commission in the evaluation of textbook materials in handwriting.

1. The books should include adequate illustrations showing correct positions for handwriting at blackboard and seat.

[1] A somewhat detailed report of the procedure as applied to arithmetic textbooks is contained in *Evaluation of Arithmetic Textbooks*. Department of Education Bulletin No. 19. Sacramento, California: State Department of Education, 1932. See also Ivan R. Waterman and Irving R. Melbo, "A Plan of Procedure for the Evaluation of Textbooks in Reading," *Elementary School Journal*, XXXV (May, 1935), 662–74; and "Evaluation of Spelling Textbooks," *Elementary School Journal*, XXXVI (September, 1935), 44–52.

2. Letter and numeral forms of sizes appropriate for use in primary and upper grades, showing in detail the method of making each character, should be included.

3. The book should include samples of the common joinings of letters.

4. There should be included samples of pleasing and correct arrangements of a composition, a letter, address on envelope, bill, check, and other commonly used forms.

5. There should be included samples of exercises designed to improve writing ability but no sentences and paragraphs to be copied by the pupils.

6. The book should include appropriate directions for the guidance of pupils with respect to such items as correct writing position; the rôle of the arm, wrist, and fingers in writing; proper method of holding pencil, pen, or chalk; rhythm in writing; importance of maintaining good quality in all writing; standards of form and speed; effective practice procedures.

7. The total volume of material for pupils should be brief, probably not exceeding thirty-two pages of ordinary textbook size.

8. Suggestions to teachers should be provided, including (*a*) statement on the place of handwriting in the school curriculum, (*b*) comprehensive directions related to teaching procedures.

9. The format of the book should conform to a high standard.

These criteria are somewhat of a departure from the standards to which books in handwriting or penmanship traditionally conform. Consequently, a series of handwriting books satisfying these criteria will be fundamentally different from the usual penmanship book. Underlying the criteria is the point of view that instruction in handwriting, though requiring skill, should not be highly formalized; that handwriting is merely a tool of expression and should be taught as such; that in handwriting instruction the teacher is more important than the textbook; and that the instructional material should be in the nature of a guide or pupil help rather than a system of drill to be rigidly followed.

COMPARATIVE STUDIES

Comparative studies were made to determine the differences on each of the criteria among nine series of handwriting textbooks submitted for state adoption. These studies were made by the Division of Textbooks and Publications of the State Department of Education to serve as a basis for the subsequent evaluation of the books by the State Curriculum Commission. While it is obviously impossible to present a complete report of these studies in a single article, a

brief general discussion of the procedure followed and of the studies that were made may be of some value to others responsible for the selection of textbook materials in handwriting.

Illustrations.—Proper habits with respect to the correct positions for handwriting materials and the correct positions for writing comfort and efficiency can probably be developed better through the use of illustrative materials than by a set of printed directions. The

TABLE I

NUMBER AND KINDS OF ILLUSTRATIONS INCLUDED IN NINE ELEMENTARY-SCHOOL TEXTBOOKS IN HANDWRITING

ILLUSTRATIONS INCLUDED	TEXTBOOK*								
	A	B	C	D	E	F	G	H	I
Correct position for writing at seat (desk)	....	×	....	×	×	×	×	×	×
Correct position for writing at blackboard	×	×	....	×	×	....	×	....	×
Correct position for holding pen or pencil	×	×	....	×	×	×	×	×	×
Correct position for holding chalk	×	×	....	....	....	....	×	....	....
Correct position for holding paper:									
a) Right-handed persons	×	×	....	×	....	×	×	....	×
b) Left-handed persons	×	×	....	....	....	....	....	....	....
How hand moves in writing	....	×	....	....	....	....	....	....	....
A class in handwriting	....	....	....	×	....	....	....	....	×
Total number of illustrations	5	7	0	5	3	3	5	2	5

* Each letter in Table I and all tables to follow is used to identify one complete series of handwriting textbooks.

number and the kinds of illustrations included in each of the nine handwriting series submitted are shown in Table I. The table offers no estimate of the quality or the adequacy of the illustrations included. Only two books contain illustrations which are up to date, which are of good photographic quality, and which depict children of ages reasonably appropriate for the grade level for which the materials are intended. All the other books contain pictures which are either definitely out of date or use adults as the subjects.

Letter and numeral forms.—All books submitted appear to contain satisfactory amounts of material showing in detail the method of making each letter and numeral. Two of the books, however, fail to recognize adequately the commonly accepted educational prac-

tice of differentiating the size of letter and numeral forms in accordance with the writing abilities of children at the various grade levels.

Samples of common joinings.—Each of the nine handwriting series contains some illustrations showing how certain commonly used letters should be joined. In no book is there a flagrant omission of such samples, but four books appear to make rather inadequate provisions for samples of common joinings.

TABLE II

SAMPLES OF COMMON FORMS INCLUDED IN NINE ELEMENTARY-SCHOOL TEXTBOOKS IN HANDWRITING

INCLUDES SAMPLES OF CORRECT FORMS FOR—	TEXTBOOK								
	A	B	C	D	E	F	G	H	I
Composition	×	×					×		
Letter	×	×	×		×	×	×	×	×
Address on envelopes	×	×	×						×
Bill	×	×					×		
Check	×	×			×	×	×		
Receipt	×				×	×			
Telegram	×	×	×						
Classified advertisement	×								
Post-office order to change address		×							
Addresses and memoranda		×							
Application for post-office money order		×							
Simple cash account		×					×		
Promissory note					×	×			
Total number of samples	8	10	3	0	4	4	5	1	2

Samples of common forms.—Instruction in handwriting usually includes some practice in the writing of a letter, composition, check, and other similar forms commonly used in personal or business activities. Table II shows the number and the kinds of sample forms included in the textbook series submitted. Only two books make fairly complete provisions for samples of common forms. In all cases the samples provided for the forms illustrated appear to be satisfactory. However, the utility of some of the forms included may be questioned. For example, the forms for a promissory note and a simple cash account probably have little applicability to the needs of elementary-school children.

Practice exercises.—Handwriting is essentially a tool rather than

an end in itself, and a good instructional program can undoubtedly be aided by textbook materials concerned with both the meaning and the skill elements in writing. Relatively little use should be made of formal "nonsense exercises," usually given in the form of "oval" and "push-pull" exercises. These appear to serve no valid educational purpose except a rather limited use as "warm-up" exercises. On the other hand, legibility in writing cannot be attained by the writing of meaningful words and sentences alone without regard to the specific skills and abilities involved. Six of the books submitted include a number of rather meaningless "oval" and "push-pull" exercises, and all books except one contain a fairly large number of sentences and paragraphs to be copied by the pupils.

Directions for pupils.—Directions designed to guide pupils in correct handwriting procedure are an essential part of handwriting textbooks. Directions for pupil guidance on the following points are included in each of the textbook series submitted except one: (1) correct writing position; (2) rôle of the arm, wrist, and fingers in writing; (3) proper method of holding pencil, pen, or chalk; (4) rhythm in writing; (5) importance of maintaining good quality in all writing; (6) standards of form and speed; and (7) effective practice procedure. When the adequacy or the suitability of such directions is considered, some attention must be given to the factor of vocabulary difficulty and the form in which the directions are presented. Specific directions for pupils should be written in a readily understandable style and probably should be directed to the pupil rather than to the teacher, except possibly in the primary grades. Of course, the teacher will be an influencing factor in any grade. Only two of the books submitted contain directions which appear to be definitely suitable for pupil use, whereas seven books contain directions primarily intended for the teacher.

Quantity of material.—While no one knows what is the optimum amount of material to be included in a handwriting textbook for each of the elementary grades, the total amount of such material should probably not be large. Table III shows the quantity of materials in each handwriting series submitted. In an analysis of the materials included in a textbook, the factor of overlapping should be considered. In textbooks in handwriting a certain amount of overlapping

between grades may be considered useful, but, in view of the wealth of available materials, a large degree of duplication appears to be undesirable. Most of the books contain some overlapping materials, and one textbook series contains a total of only six pages of different material in the books for Grades IV, V, VI, VII, and VIII. It would appear to be a better educational practice and more economical to present such material in a single book for all the grades concerned rather than to duplicate exactly the same material in a book for each of the grades.

TABLE III

NUMBER OF PAGES OF MATERIALS INCLUDED IN NINE ELEMENTARY-SCHOOL TEXTBOOKS IN HANDWRITING

GRADE	TEXTBOOK								
	A	B	C	D	E	F	G	H	I
I	50	32	33	40	32	32	36	52	0
II		32	58	32	32	32	36		40
III		32	39	32	32	32	32		48
IV		32	49	32	32	32	32		56
V		32	28	32	32	32	32	56	0
VI		32		32	32	32	32		72
VII			33	32	32	32	32	0	0
VIII				32	32	32	32	0	0
All grades	50	192	240	264	256	256	264	108	216
Size of page (in inches)	8½×6	8×6½	11×8½	8×7	8×4	8×4	7½×4	8×4	8½×6

Suggestions to teachers.—To some extent information concerning the place of any given subject in the total elementary-school program and suggestions related to teaching procedures should be provided by the basic textbook materials which are used in the teaching of the subject. In seven of the handwriting series examined suggestions to teachers are presented in separate manuals for the teachers. Each of the other two books presents a small amount of material directed to teachers as a part of the foreword or preface. Since there is a lack of objective evidence on teaching procedures in handwriting, the suggestions to teachers in the several books differ widely and frequently are mere expositions of the alleged superiority of certain systems of handwriting.

Format.—Since format is a factor which can be corrected with more or less ease, it probably is less important as a criterion in the evaluation of handwriting materials than any of the other criteria. Analysis of the size of type, size of page, binding, and the general arrangement and makeup disclosed a high degree of uniformity in the books submitted. Except in the case of mimeographed and photostatic materials, no significant differences were noted.

CONCLUSION

In the comparative studies which have been briefly described, no attempt has been made to present data with respect to the relative merits of textbooks in handwriting. The purpose of this article is primarily to describe a plan of procedure which takes a step in the direction of a scientific selection of textbooks and to suggest certain specific studies which can be readily made in the process of selecting textbooks in handwriting. In no way is this list of studies complete. The study on each of the criteria outlined can easily be expanded and data secured on other points. The report serves, however, to indicate the analytical approach which can be made to the problem of textbook evaluation. It also indicates something of the extent to which objective data rather than mere opinion may be utilized in comparing textbooks. Using this procedure, the evaluating body can confidently select the book or the series which is best in terms of the criteria or standards previously formulated.

SELECTED REFERENCES ON ELEMENTARY-SCHOOL INSTRUCTION

III. The Subject Fields—Continued

This list of references is the third of a series relating to instruction at the elementary-school level. The first list contains items on the curriculum, methods of teaching and study, and supervision. The second list contains items grouped under the following subject fields: reading, English, spelling, handwriting, the social sciences, and geography. The present list covers the remaining subject fields at the elementary-school level and is the last of the series of three dealing with elementary-school instruction.

ARITHMETIC

G. T. Buswell

The following bibliography has been selected from the references on arithmetic published during the period from June, 1934, to June, 1935. It includes both reports of research and discussions. The eleven references included were selected from a list of sixty-one titles examined by the compiler.

512. Bond, Elias A. *The Professional Treatment of the Subject Matter of Arithmetic—For Teacher-training Institutions, Grades I to VI.* Teachers College Contributions to Education, No. 525. New York: Teachers College, Columbia University, 1934. Pp. 316.

A comprehensive treatment of the problem of training teachers of arithmetic and of the content of a desirable course for such teachers.

513. Dickey, John W. "The Value of Estimating Answers to Arithmetic Problems and Examples," *Elementary School Journal*, XXXV (September, 1934), 24–31.

Reports a limited control experiment the results of which seem "to indicate that practice in estimating answers to arithmetic problems is of no more value to sixth-grade pupils than is the traditional practice in the solution of such problems."

514. Good, H. G. "Invention and School Arithmetic," *School and Society*, XXXIX (June 23, 1934), 796–802.

An interesting historical account of significant contributions to the content of arithmetic.

515. GROSSNICKLE, FOSTER E. "Methods of Estimating the Quotient in Long Division Used by Teacher-training Students," *Elementary School Journal*, XXXV (February, 1935), 448–53.

An analysis of the returns from sixty-six questionnaires received from teacher-training institutions, showing which of eleven possible methods of estimating the quotient were used by students.

516. MACLATCHY, JOSEPHINE. "Number Abilities of First-Grade Children," *Childhood Education*, XI (May, 1935), 344–47.

A brief summary of present knowledge on the topic as contributed by the author and others.

517. MCLAUGHLIN, KATHERINE. "Number Ability of Preschool Children," *Childhood Education*, XI (May, 1935), 348–53.

A brief summary of a study of the development of counting, recognition of number aggregates, and combinations of aggregates. Shows relation of these abilities to general intelligence.

518. MORTON, R. L. "Sales of Books on the Teaching of Arithmetic," *Mathematics Teacher*, XXVIII (March, 1935), 138–44.

Shows the number of books on the teaching of arithmetic sold during the first ten years after publication. Data on sales during 1923–32 are also given, showing effects of the depression.

519. POLKINGHORNE, ADA R. "Young Children and Fractions," *Childhood Education*, XI (May, 1935), 354–58.

Summarizes the results of a survey of the knowledge of fractions in a group of 266 children below Grade IV.

520. *The Teaching of Arithmetic.* Tenth Yearbook of the National Council of Teachers of Mathematics. New York: Teachers College, Columbia University, 1935. Pp. vi+290.

William A. Brownell's contribution to the yearbook, a chapter entitled "Psychological Considerations in the Learning and the Teaching of Arithmetic," presents arguments for a "meaning" theory for teaching arithmetic as contrasted with the "drill" theory and the "incidental" theory. This article is worth careful study. Leo J. Brueckner, in a chapter entitled "An Analysis of Instructional Practices in Typical Classes in Schools of the United States," reports the results of a survey of teaching in 505 classes, which revealed that the major objective of the teachers was the development of skill in computation. A chapter on "Informational Arithmetic," by B. R. Buckingham, is a fertile discussion, giving many concrete proposals for adding informational material to the course in arithmetic. Course-of-study or textbook committees will find this article significant. The chapter on "The Relation of Social Arithmetic to Computational Arithmetic," by G. T. Buswell, is a criticism of the application of a narrow interpretation of the "social-utility" theory, chiefly

as it is applied to computation. A study by Paul R. Hanna and others, "Opportunities for the Use of Arithmetic in an Activity Program," reports a detailed survey, in Grades III–VI only, of the computational and non-computational arithmetical situations encountered during four months in teaching arithmetic through activities. The authors emphasize the need for something more than the activity method in teaching arithmetic. An important chapter by J. T. Johnson, "Economy in Teaching Arithmetic," reports an experiment in teaching addition and subtraction of fractions by means of decimal equivalents. Romie Dustin Judd and Robert L. Morton, in a chapter entitled "Current Practices in Teacher-training Courses in Arithmetic," report an analysis of the replies to a questionnaire received from 129 teacher-training institutions. "The Problem of Transfer in Arithmetic," by James R. Overman, is a summary of the present status of transfer of training in arithmetic as revealed by several significant investigations. The study by Austin C. Repp, "Types of Drill in Arithmetic," is an attempt to secure a better understanding of the function of drill in arithmetic. The author gives illustrations of various types of drill and argues for their proper use in a "teaching, fixation, and maintenance" program. The discussion by C. L. Thiele, "The Mathematical Viewpoint Applied to the Teaching of Elementary School Arithmetic," is of particular value to students whose specialization has been limited chiefly to courses in education. Clifford B. Upton, in "Making Long Division Automatic," gives an analysis of methods of teaching long division.

521. WILSON, GUY M. "Research: Suggested Standards for Summarizing and Reporting Applied to Two Recent Summaries of Studies in Arithmetic," *Journal of Educational Research*, XXVIII (November, 1934), 187–94.

A critical analysis of two bibliographies on arithmetic for the year 1930: one prepared by the United States Office of Education, the other by the author of the present bibliography.

522. WOODY, CLIFFORD. "Arithmetic," *Special Methods and Psychology of the Elementary-School Subjects*, pp. 14–30, 93–97. Review of Educational Research, Vol. V, No. 1. Washington: American Educational Research Association of the National Education Association, 1935.

A summary of ninety-six studies in arithmetic. A valuable reference for students wishing an overview of recent research.

SCIENCE

SAMUEL RALPH POWERS[1]
Teachers College, Columbia University

This bibliography on instruction in science in the elementary school is believed to be fairly complete for the interval of June, 1934,

[1] Miss Agnes W. Nemir, supervisor of elementary science in the public schools, Glens Falls, New York, assisted in selecting the articles and in preparing the annotations.

to June, 1935. The articles have come from different centers in which constructive work is in progress.

523. AVERY, LEWIS B. "Science in the Program of the Elementary School," *Science Education*, XVIII (October, 1934), 152–57.

A description of the elementary-school program of Oakland, California, in which science and social studies are used as the core of the curriculum.

524. BLOUGH, GLENN O. "Let's Do an Experiment," *School Science and Mathematics*, XXXV (June, 1935), 603–5.

A discussion of experimentation as a teaching tool in elementary-school science, with emphasis on the importance of definitely organized presentation.

525. BRUCE, G. V. "Elementary School Science Reference and Instructional Materials," *Science Education*, XIX (February and April, 1935), 25–29, 76–78.

A brief discussion of the need for reading and instructional materials in elementary-school science. A partial annotated bibliography of suitable materials is included.

526. BURGESS, ANNA E. "The Curriculum School as a Method of Building a Course of Study in Elementary Science," *Science Education*, XVIII (December, 1934), 216–21.

A discussion of various methods of building curriculums; the technical tasks in curriculum-making; and the system used by the Cleveland schools, namely, observing results in a curriculum-center school from which the city curriculum is evolved.

527. CURTIS, FRANCIS D. "Curriculum Investigations at the Elementary- and Secondary-School Levels: I. Science," *The Curriculum*, pp. 165–68, 228–29. Review of Educational Research, Vol. IV, No. 2. Washington: American Educational Research Association of the National Education Association, 1934.

A review of curriculum investigations with reference to trends toward establishment of sequence in science courses, studies on overlapping of subject matter and of subject-matter contents, and studies of scientific attitudes and scientific methods.

528. DMOCHOWSKI, A. "Science Teaching in Polish Primary Schools," *School Science Review* (London), XVI (December, 1934), 145–52.

A description of the teaching of science in the first seven grades of Polish public schools, an outline of the course of studies for these grades, and a description of the cities' central laboratories from which equipment is distributed and to which teachers may take classes for instruction in science.

529. DOLMAN, HELEN. "Limestone: A Sixth Grade Unit," *School Science and Mathematics*, XXXV (March, 1935), 245–51.

Description of a unit on limestone and of the desirable outcomes of such a unit.

530. HALL, JENNIE. "Teaching Scientific Method: V. Why Science in the Elementary School," *School Science and Mathematics*, XXXIV (October, 1934), 693–99.

A discussion of the contribution of elementary-school science to the development of scientific attitudes.

531. HAUPT, GEORGE W. *An Experimental Application of a Philosophy of Science Teaching in an Elementary School.* Teachers College Contributions to Education, No. 633. New York: Teachers College, Columbia University, 1935. Pp. vi+110. (See also *Science Education*, XVIII [December, 1934], 234–38.)

This study was undertaken to test, throughout the elementary school, the recommendations for science-teaching presented in *A Program for Teaching Science* (Part I of the Thirty-first Yearbook of the National Society for the Study of Education). There is included an exposition of instructional method which is directly applicable to the classroom.

532. HULTZ, HELEN L. "Science for Children," *Science Education*, XIX (April, 1935), 56–60.

The author indicates the close connection between science and the child's experience, emphasizes the values of guided observation and experimentation, and enumerates many children's interests involving scientific meaning.

533. MELROSE, MARY. "Radio Lessons in Elementary Science," *Science Education*, XVIII (October, 1934), 167–68.

Describes radio programs in elementary science used with the sixth-grade pupils of seventy-two schools in Cleveland.

534. NICHOLS, HELENE. "Teaching Science in an Elementary School That Uses the Unit Method of Instruction," *School Science and Mathematics*, XXXV (January, 1935), 63–68.

A description of the rôle of elementary science in unit teaching in Manhasset, New York.

535. PALMER, E. LAURENCE. *Through the Years in School Science.* Cornell Rural School Leaflet (Teachers' Number), Vol. XXVIII, No. 1. Ithaca, New York: New York State College of Agriculture at Cornell University, 1934.

This number contains a synopsis of two-year sequences in elementary-school science and specific suggestions for lessons, seasonally arranged and graded to the needs of rural schools. The outline is closely integrated with the New York State syllabus in elementary science and with the *Handbook for Rural Elementary Schools: The Social Studies Group.*

536. PARKER, BERTHA M. "Air Pressure: An Intermediate-Grade Unit in Science," *Science Education*, XVIII (December, 1934), 207–11.

Discusses criteria of content and organization and explains technique in the development of units in science, using "Air Pressure" as an exemplary unit.

537. PARKER, BERTHA M. "A Science Exercise," *School Science and Mathematics*, XXXV (May, 1935), 457–59.

Discusses the learning value of a summary program of pupil demonstrations for a visiting class.

538. PARKER, BERTHA M. "Suggestions for a Unit on Thermometers," *School Science and Mathematics*, XXXV (June, 1935), 578–83.

Describes a challenging development of a fourth-grade unit on thermometers.

539. POWERS, SAMUEL RALPH. "Science," *Special Methods and Psychology of the Elementary-School Subjects*, pp. 70–74, 114–15. Review of Educational Research, Vol. V, No. 1. Washington: American Educational Research Association of the National Education Association, 1935.

A review of recent investigations in elementary-school science discussing modern trends in the United States and other countries, curriculum studies, studies of procedures in learning, and the effects of instruction in elementary science on attitudes of the children.

540. ROBERTSON, MARTIN L. "The Selection of Science Principles Suitable as Goals of Instruction in the Elementary School," *Science Education*, XIX (February and April, 1935), 1–4, 65–70.

A concise statement of the method of investigation followed in determining principles of science suitable as goals of instruction in elementary schools. Includes a list of the goals selected.

541. SHONTZ, GERALDINE. "Factors Conditioning the Development of Understandings in Beginning Science," *School Science and Mathematics*, XXXV (April, 1935), 411–15.

Discusses the problems of grade placement, teacher background, superstitions and unscientific beliefs, animistic treatment of science materials, and lack of sufficient suitable references for elementary-school science.

542. VINAL, WILLIAM GOULD. "The Value of Nature Leadership in Camp as Training for the Teaching of Elementary Science," *Science Education*, XIX (February, 1935), 16–19.

Discusses the differences in the teaching of science in the schoolroom and in the camp and stresses advantages to the elementary-school science teacher of experience as student teacher in camp.

543. WILSON, MERLE. "Fourth-Grade Unit on Study of Animals of the Environment," *Science Education*, XIX (February, 1935), 24.

A brief outline of methods used by the author in teaching a study of animals of the environment.

MUSIC[1]

ANNE E. PIERCE
University of Iowa

544. BORLAND, JOHN E. "Rhythmic Training in Boys' Schools," *Musical Times* (London), No. 1106 (April, 1935), pp. 334–36; No. 1107 (May, 1935), pp. 428–29; No. 1108 (June, 1935), pp. 523–24.

A series of articles describing a course in fundamental rhythmic training for children of elementary-school age.

545. BOWEN, CATHERINE DRINKER. *Friends and Fiddlers.* Boston: Little, Brown & Co., 1935. Pp. 262.

A book telling of pleasurable experiences in musical participation and suggesting ways to interest children in music. The chapter dealing with family music is particularly significant for teachers.

546. EARHART, WILL. *The Meaning and Teaching of Music.* New York: M. Witmark & Sons, 1935. Pp. xii+250.

A philosophical, aesthetical, and psychological discussion of different phases of musical education by a well-qualified musician and educator. The Appendix includes an account of an experimental study in creative music.

547. EARHART, WILL. "Music in the Schools of England," *Music Educators Journal,* XXI (March–April, 1935), 14–15.

An American's impressions of music instruction in the schools of England gained from brief observation.

548. ELLIS, G. C. "A School Wood-Wind Orchestra," *Musical Times* (London), No. 1103 (January, 1935), pp. 42–43.

A report of an experiment in a Sheffield (England) elementary school in making pipes from bamboo and cork to form the basis of a wood-wind ensemble.

549. HUBBARD, GEORGE E. *Music Teaching in the Elementary Grades.* Chicago: American Book Co., 1934. Pp. x+228.

A plan of work for the first six grades, with specific instructional helps for teachers.

550. IRWIN, JOHN STAMM. "Piano Classes That Make Success," *Etude,* LIII (January, 1935), 15.

Gives devices for interesting children in class lessons in piano. A suggested list of teaching materials is appended.

551. JACQUES, REGINALD. *Voice-training in Schools.* New York: Oxford University Press, 1934. Pp. 118.

[1] See also Item 97 in the list of selected references appearing in the March, 1935, number of the *Elementary School Journal.*

Deals with vocal problems of pupils ranging from ten to eighteen years in age. Includes suggestive lists of songs for each period of instruction, methods of teaching them, and directions for conducting.

552. KWALWASSER, JACOB. "What Can Children Teach Us about Teaching Children?" *Music Educators Journal*, XXI (October, 1934), 21, 24.

A brief review of experiments in music education. Among the subjects investigated are the effect on children's reactions to music of range and keys of songs; their likes and dislikes of certain interpretations of songs and tonal quality used; the relation of dancing to rhythmic understanding; and the influence of singing on non-music learning, as, for example, arithmetic.

553. PORTER, E. G. "Children's Concerts," *Musical Times* (London), No. 1107 (May, 1935), pp. 430–31.

Presents results of a questionnaire given to discover children's reactions to compositions heard in a concert.

ART AND ART EDUCATION

W. G. WHITFORD

554. *Art Education Today.* Edited by members of the Fine Arts Staff, Teachers College, Columbia University. New York: Teachers College, Columbia University, 1935. Pp. 78.

An annual publication devoted to problems of art education. Contains discussions of the following topics: "Art," "Art and the Future," "A Point of View in Art Education," "The Intuitive Method," "Art Appreciation," "Give Us Art in Our Time," and special problems pertaining to the teaching of various art projects.

555. BERRY, ANA M. *Art for Children.* New York: Studio Publications, 1934. Pp. 152.

A new and more attractive edition of a book previously issued in 1929. Profusely illustrated with famous pictures for children grouped under the following headings: "Animals," "Games and Amusements," "Ships," "Legends and Adventure," "Angels and Fairies," "Portraits of Children." Excellent interpretations accompany the pictures.

556. BRYANT, LORINDA MUNSON. *The Children's Book of Recent Pictures.* New York: D. Appleton-Century Co., Inc., 1934. Pp. x+106.

A compilation of fifty pictures for children. Each picture is reproduced in halftone and is accompanied by a page of explanatory text. The text describes the picture, first, from the standpoint of art in general and, then, from the standpoint of its history and its artist. Only pictures produced within the last hundred years are included.

557. GLACE, MARGARET F. S. *Art in the Integrated Program.* Shippensburg, Pennsylvania: Margaret F. S. Glace (State Teachers College), 1934. Pp. viii+94.

An analysis of the art content in sixty-four units of activities in Grades IV, V, and VI. Presents a composite list of problems and materials used in the various activities and a good bibliography of 186 records of units of work.

558. KALTENBACH, G. E. *Dictionary of Pronunciation of Artists' Names.* Chicago: Art Institute of Chicago, 1934. Pp. vi+74.

A simple and practical guide for the pronunciation of artists' names. Will be of especial value to teachers of art in acquiring the correct pronunciation of the names of foreign artists. Should be on every art teacher's desk.

559. MEIER, NORMAN C. "What We Now Know about Talent in Children," *Western Arts Association Bulletin*, Vol. XVIII, No. 4, pp. 143–63. Indianapolis, Indiana: Western Arts Association, 1934.

A general discussion of the aesthetic intelligence of children and an explanation of experiments which have been conducted under the general direction of the author.

560. MORRISON, JEANETTE GERTRUDE. *Children's Preferences for Pictures Commonly Used in Art Appreciation Courses.* Chicago: University of Chicago Press, 1935. Pp. xii+56.

An investigation to determine children's preferences for pictures commonly listed in public-school courses of study. The study shows that children's preferences do not coincide with the classification of pictures ordinarily used in school work. It further indicates that the children's interests in picture types are not entirely in accord with traditional adult opinion in this respect.

561. PAYANT, FELIX. *Our Changing Art Education.* Columbus, Ohio: Keramic Studio Publishing Co. Pp. 94.

A profusely illustrated book presenting a progressive and educational approach to the teaching of art. Discusses individual and social needs for art, changing objectives, the art curriculum, the new teacher of art, and the appreciation-creative cycle, and gives special methods for the teaching of a variety of art and craft projects.

562. PENNSYLVANIA STATE DEPARTMENT OF PUBLIC INSTRUCTION. *Course of Study in Art Education for Elementary and Secondary Schools.* Bulletin 41. Harrisburg, Pennsylvania: State Department of Public Instruction, 1933. Pp. 110.

A carefully prepared syllabus in art for elementary and secondary schools. It is unusually complete and contains detailed outlines of objectives, subject-matter content, methods, measurement of progress, and full bibliographies for each division of the school.

563. RUSK, WILLIAM S. (Editor). *Methods of Teaching the Fine Arts.* Chapel Hill, North Carolina: University of North Carolina Press, 1935. Pp. x+220.

A symposium of opinions pertaining to art education. Includes discussion of art-teaching in the primary grades, elementary school, secondary school, col-

lege, and museum of art. A diversity of subjects, having little relation to one another, are discussed by prominent authorities. Because of the wide difference in subject matter treated, it is difficult to determine for which particular group of art educators the book will have the most interest.

564. TODD, JESSIE, and GALE, ANN VAN NICE. *Childcraft Art Book.* Chicago: W. F. Quarrie & Co., 1935. Pp. 64.

A portfolio of ample size, comprising sixty-three full pages of illustrations, which is planned to inspire children in creative art work. The first sixteen pages of the book are devoted to a comprehensive program of activities based on the social studies. The remaining pages give detailed instructions for projects in drawing, painting, design, construction, and modeling.

565. TOMLINSON, R. R. *Picture Making by Children.* New York: Studio Publications, 1934. Pp. 120.

Deals with the creative instincts of children in drawing and painting. Presents methods for developing creative expression. Profusely illustrated with examples of children's work.

INDUSTRIAL ARTS

HOMER J. SMITH
University of Minnesota

566. BAWDEN, WILLIAM T. "Professional Meetings for Shop Teachers," *Industrial Education Magazine*, XXXVI (March, 1934), 75–80.

The author details a project that he carried out in connection with the graduate program at the Kansas State Teachers College, Pittsburg. The discussion is direct and forceful, covering such matters as the need for training in group leadership, the technique of conducting meetings, the handling of individual and committee assignments, and the conduct of conference periods.

567. CAMPBELL, H. D. "High-School Mechanical Drawing," *Industrial Arts and Vocational Education*, XXIII (October, 1934), 316–17.

A brief and excellent article concerning drawing as a cultural and a vocational subject. Three charts help the reader to appreciate the place of drawing in modern life, its main types or divisions, and its relations to other curriculum offerings.

568. CRAMLET, ROSS C. "Arguments for Industrial Arts," *Industrial Arts and Vocational Education*, XXIV (April, 1935), 107–8.

The author provides a list of fifty reasons why industrial-arts work should be a part of the system of general education.

569. FALES, ROY G. "Industrial-Arts Teaching Content," *Industrial Education Magazine*, XXXVI (September, 1934), 185–91.

The author stresses the need of more informational work in connection with the teaching of industrial arts. He offers exceedingly practical ideas about content and suggestions on how to plan so that the necessary time may be allotted. Twelve classifications of materials are named, such as structural and aesthetic design, geography, occupational information, and products of industry.

570. GARD, THERON DAVID. "Information Topics in Junior High School Woodworking," *Industrial Education Magazine*, XXXVII (May, 1935), 161–63.

A brief report of a study in which ninety-one industrial-arts teachers and nine leaders co-operated. The present practices of the teachers in using information topics were checked against the recommendations of the leaders.

571. GRAY, ROLLAND O., and HUNTER, WILLIAM L. *Index to 2500 Books on Industrial Arts Education and Vocational Industrial Education, 1820–1934*. Ames, Iowa: Industrial Arts Department, Iowa State College of Agriculture and Mechanic Arts, 1935. Pp. 108.

A helpful list of special-field publications, limited strictly to books. More than twenty-five hundred items, chiefly representative of the industrial subjects commonly found in the schools, are included in twenty-one classifications. Although there are no annotations, the list should be of much continued usefulness to industrial teachers and supervisors.

572. HUNTER, WILLIAM L., and LIVINGSTON, EVERETT G. *A Guide to Magazine Articles on Industrial Arts Education and Vocational Industrial Education*. Ames, Iowa: Industrial Arts Department, Iowa State College of Agriculture and Mechanic Arts, 1934. Pp. 76.

Two careful workmen have prepared a helpful list of more than fifteen hundred articles, well within the bulletin title, which have appeared from 1920 to 1934. There are no annotations, but the publication is of high value for numerous types of educational workers. It will prove especially helpful for teachers in the special field who do not have access to well-equipped libraries.

573. NORRIS, HUGH. "Rating the Department," *Industrial Arts and Vocational Education*, XXIV (May, 1935), 133–36.

An illustrated discussion of how an industrial-arts department may be rated. The author gives and explains a detailed rating scale of a hundred points, the main divisions of which are: (1) "[Factors] Administrative in Nature," (2) "Teaching Forces," (3) "Physical Equipment," (4) "Pupils," (5) "Subject Matter," and (6) "Extra-Curriculums." Each division or set of factors is particularized by means of specific questions.

574. ROBERTS, WILLIAM E. "A Program for Instruction in Industrial Arts for the Junior High Schools," *Industrial Education Magazine*, XXXVII (March, 1935), 64–72.

A forward-looking presentation by a man whose views have been highly prized in the special field for a quarter-century. Roberts writes clearly and directly about objectives, subject matter, methods, instructional materials, testing, and class and department organization.

575. "School Shop Annual, 1935 Edition," *Industrial Arts and Vocational Education*, XXIV (February, 1935), 33–68 and 1A–56A.

A special edition of a special journal devoted to discussion of types of school shops, courses, and plans of management. It contains lists of equipment and supplies, is profusely illustrated, and carries more than the usual amount of

advertising material. It is the eighth "School Shop Annual" issued by the Bruce Publishing Company for the improvement of industrial education.

576. SMITH, HOMER J. "A Program of Industrial Education," *Industrial Education Magazine*, XXXVI (January, 1934), 1–4.

Prepared originally as a radio talk, this paper is a popular discussion of the function of industrial courses in the several administrative units or at the several levels of the public-school system. The article will be of more practical interest to school administrators and boards than to teachers in the special field.

577. *Standards of Attainment in Industrial-Arts Teaching.* Final Report of the Committee as Presented at the Pittsburgh Convention, Friday, December 7, 1934. Washington: Industrial Arts Section of the American Vocational Association (1212 Vermont Avenue), 1934. Pp. 92.

This excellent bulletin covers completely the work of a committee appointed in 1928, which has made five preliminary reports to the association. It affords an excellent statement of the "Objectives of the Industrial-Arts Teacher" and the means of attaining these values in the lives of pupils and in whole-school results. Lists of learning units in eleven industrial subjects are provided, and there are worth-while suggestions on the planning of courses, the conduct of classes, the selection of projects, and the measurement of pupil progress.

578. *Supervised Correspondence Study.* Report of a Conference held at Teachers College, Columbia University, August 8, 9, 10, 1934. Scranton, Pennsylvania: International Textbook Co., 1934. Pp. 66.

This report summarizes developments in the practice of extending the school offering by means of correspondence instruction. The history of the plan, advantages, objections, relation to guidance programs, local supervision of the work, and costs are covered in a helpful way. An excellent annotated bibliography is supplied which includes writings on this new school service in more than twenty nations in addition to the United States.

579. VANCE, C. E. "Industrial Arts from the Viewpoint of the Superintendent," *Industrial Education Magazine*, XXXVII (March, 1935), 57–63.

This intelligent and forward-moving discussion will be read with interest and profit by school administrators of general responsibility as well as by teachers and supervisors in industrial education. The changing student personnel and the new problems of the school service are set forth, with special reference to the offerings and practices in the industrial arts.

580. WEAVER, G. G., and ERICSSON, E. S. (Compilers). *Bibliography of Technical and Industrial Motion Picture Films and Slides.* New York: Beatryce Finn, Librarian, Industrial Teacher-training Library (155 West Sixty-fifth Street), 1934. Pp. 182.

Lists 1,058 films and 218 sets of slides on subjects appropriate for school use, chiefly technical and industrial. Films are listed under twenty-seven headings and many subdivisions. Slides are likewise conveniently classified. Annotations for all items give sources, descriptions, and conditions of sale or rental.

HOME ECONOMICS[1]

BEULAH I. COON
United States Office of Education

581. FLORIDA STATE DEPARTMENT OF PUBLIC INSTRUCTION. *Home Economics Course of Study for Florida High Schools:* Volume II, Part VII, Grades VII–XII. Tallahassee, Florida: State Department of Public Instruction, 1935. Pp. 194.

One of the bulletins in the series resulting from Florida's curriculum-revision program. The work of Grades VII and VIII centers in the girl's participation in home activities and her solution of her personal problems.

582. GOSLING, THOMAS W. "Home Economics: A Fundamental in the Curriculum," *Practical Home Economics*, XIII (July, 1935), 207, 216–17.

A brief history of home-economics development as a part of the school curriculum is supplemented by an emphasis on its value now and the need for it to emphasize increasingly the social problems of the home.

583. HERRINGTON, EVELYN M. *Homemaking—An Integrated Teaching Program.* New York: D. Appleton-Century Co., Inc., 1935. Pp. xii+206.

A description of the way in which all homemaking activities are articulated into a home program with an apartment used as the setting. Schedules for activities are developed with the pupils, and responsibilities are rotated so that habits, skills, management, and responsibility for the "family group" and for other pupils who use the apartment are accepted in a sequence which is progressively difficult.

584. MCALLISTER, MRS. GEORGE, and HYMAN, MARY. *Course of Study in Homemaking for the Elementary Schools, 1934–1935.* Concord, North Carolina: Cabarrus County Board of Education, 1935. Pp. 16.

Describes a plan for utilizing homemaking activities and interests of pupils as a basis for the elementary-school program in rural schools.

585. MCDOUGALL, HELEN I. "When Sixth Graders Care for Children," *Practical Home Economics*, XII (December, 1934), 359, 370, 372.

A survey indicated that more than half the girls enrolled in Grade VI took care of preschool children in their own families or as a means of earning money. A unit centered in the care of children during play hours was organized.

586. MILLER, ELLEN, and OTHERS. "A Program for Education in Family Living in the Elementary Schools." Detroit, Michigan: Ellen Miller (Merrill-Palmer School, 71 East Ferry Avenue), 1933. Pp. 120 (mimeographed).

[1] See also Item 209 in the list of selected references appearing in the March, 1935, number of the *School Review*.

A program for education in family living is outlined, giving objectives, topics of study, activities, and outcomes for each grade from kindergarten through Grade VI. This program is the result of a series of experiments in Detroit schools.

587. RAITT, EFFIE I. "The Nature and Function of Home Economics," *Journal of Home Economics*, XXVII (May, 1935), 265–73.

Home economics is described as a subject integrated around "use" rather than in a "logical relationship," and its service is that of applying other sciences and arts to situations to which the individual must make adjustment from birth to death.

588. ROCKWOOD, LEMO DENNIS. "Problems of the Home Economics Teacher—A Symposium: Social and Family Relations," *Journal of Home Economics*, XXVII (March, 1935), 159–62.

Summarizes a national study of the teaching of social and family relations at the elementary- and high-school levels in various parts of the country. In the elementary school and the junior high school this program should be included as a part of existing courses taught by the regular teacher with optional assistance available from the home-economics teacher or another especially prepared teacher.

589. SHEFFER, W. E. "The Place of Home Economics in a Functioning Curriculum," *Journal of Home Economics*, XXVII (September, 1935), 409–14.

Home economics is presented as a necessary part of the modern curriculum because it gives an insight into the oldest and the most essential institution of our modern civilization, the home and family, and because it functions in seven different ways in developing young people.

590. VAN LIEW, MARION S. "Home Economics in the Grades," *New York State Education*, XXII (November, 1934), 141–42, 173–74.

The opportunities for correlating home-economics work with the program in each of the grades are illustrated, and possibilities are given for specific emphasis on home and family life which would fit into the centers of interest likely to be used with pupils in various grades.

591. VIRGINIA STATE BOARD OF EDUCATION. *Tentative Course of Study for Virginia Elementary Schools, Grade I–VII*, pp. xiv+560, and *Tentative Course of Study for the Core Curriculum of Virginia Secondary Schools, Grade VIII*, pp. xiv+320. Richmond, Virginia: State Board of Education, 1934.

Reports of the state-wide program of curriculum revision are based on a center of interest for each grade. Six major functions of social life are emphasized in the first two grades and eight in Grades III–VII. Home-life content permeates the first seven grades and is apparent in the social-science and the natural-science work in Grade VIII.

LIBRARY TRAINING[1]

EVANGELINE COLBURN

The review of the literature on library training published in the past year indicates that frequent reference is made to the need of the school principal's understanding the function of the library. The trend of thought seems to be that the school library cannot take its proper place in education until school administrators generally appreciate its worth.

592. DICKINSON, C. W., JR. "How May Library Instruction Be Integrated with Curricular Subjects and Whose Should Be the Responsibility for Integrating Such a Program—the Teaching Staff or the Library Staff?" *Peabody Journal of Education*, XI (May, 1934), 272–75.

Outlines library habits and lessons for Grades I–VII.

593. GREEN, EDWARD. "Schools and Libraries: A Lesson in Co-operation," [*London*] *Times Educational Supplement*, No. 998 (June 16, 1934), 196.

A brief and concise discussion on training children to use libraries. Typical examples of library lessons and tests are included.

594. MCPHERSON, DOROTHY. "Stimulating Children's Reading Interest," *Wilson Bulletin for Librarians*, IX (March, 1935), 369–70.

A brief description of methods and devices which may be used in children's libraries to stimulate interest in books and reading.

595. ROBINSON, ALICE PAGE. "The School Library in Reading Improvement," *American Childhood*, XX (November, 1934), 28–30.

Specific description of a study of Holland made by a fourth-grade class during library reading periods, showing how the children were introduced to reference materials and how their experience was enriched through the use of the library.

596. SHERLOCK, ESTHER. "Guidance in the Library," *High Points in the Work of the High Schools of the City of New York*, XVI (October, 1934), 27–31.

Presents the child's problem in using the library and its relation to vague assignments. Emphasizes that teachers should know the contents of books and should give proper guidance in reference work.

597. SHIELDS, KATHARINE. "Correlating the School Libraries," *Wilson Bulletin for Librarians*, IX (February, 1935), 307–10.

Describes library activities engaged in by children in the elementary school, outlines the year's work in library science for high-school pupils, and stresses the importance of inculcating from early school days basic library science which will serve pupils in future work.

[1] See also Item 70 in the list of selected references appearing in the February, 1935, number of the *School Review*.

598. WILSON, LOUIS R. "Promoting Abilities and Interests through the School Library," *Elementary School Journal*, XXXIV (June, 1934), 737–48.

Stresses the fact that school men generally must have fuller realization of the significance of the use of library materials. Lists interests and abilities which schools should promote through the library and suggests ways and means of attaining them.

599. WOOD, VELMA STOREY. "General Aims of a School Library," *Library Journal*, LX (February 15, 1935), 160.

Outlines briefly the aims of the school library and suggests ways of training children to work independently and intelligently, with the view of preparing them to use libraries in later life.

HEALTH AND PHYSICAL EDUCATION[1]

C. H. McCLOY
University of Iowa

600. HOEFER, CAROLYN, and HARDY, MARTHA CRUMPTON. "Some Influences of a Health-Education Program during the Elementary-School Years," *Elementary School Journal*, XXXV (January, 1935), 368–82.

A partial report of a study which tends to show that children receiving special health education make faster and better school progress than those not receiving special help.

601. HOEFER, CAROLYN, and HARDY, MARTHA CRUMPTON. "The Rôle of Health in the Child's Development," *Elementary School Journal*, XXXV (February, 1935), 423–39.

Presents evidence that general health may be a significant factor in the rate of physical growth of the child during elementary-school years and that good health is important to the child's mental efficiency.

602. IRELAND, ALLEN G. "Essentials of the School Health Program," *Journal of Health and Physical Education*, V (September, 1934), 15–17, 44–45.

A succinct statement by a state administrator of the organization of the various aspects of the school health program.

603. IRELAND, ALLEN G. "The Administration of Physical Education," *Journal of Health and Physical Education*, VI (February, April, and June, 1935), 7–9, 59–60; 18–22, 63; 24–26, 63.

An excellent summary of administrative problems and methods of meeting them for both elementary and high schools.

604. JONES, HIRAM A. *The Administration of Health and Physical Education in New York State*. Teachers College Contributions to Education, No. 622. New York: Teachers College, Columbia University, 1934. Pp. vi+156.

[1] See also Items 264, 265, 267, 269, 274, 275, 278, 280, and 284 in the list of selected references appearing in the March, 1935, number of the *School Review*.

A detailed statement of the organization of physical education in the public schools of New York. This organization has developed to the point where application of the principles may easily be made to almost any urban-school situation in the country.

605. MASON, BERNARD S., and MITCHELL, ELMER D. *Social Games for Recreation.* New York: A. S. Barnes & Co., Inc., 1935. Pp. vi+422.

A splendid compilation of teaching material in the recreation field.

606. MONTAGUE, KIRK. "A Curriculum Study of Physical Education Activities for the Boys and Girls of the Seventh, Eighth, Ninth, and Tenth Grades of the Public Schools of Norfolk, Virginia," *Research Quarterly of the American Physical Education Association*, VI (May, 1935), 92–104.

A description of a method of constructing a curriculum in physical education by securing from pupils an expression of their interest in activities selected from several courses of study.

607. SIEMSEN, WALTER J., and DOLAN, G. KINDRED. "The Problem of Body Mechanics in Elementary and Secondary Schools," *Journal of Health and Physical Education*, VI (March, 1935), 10–12, 78–79.

A discussion of some practical problems commonly found in the field of corrective physical education.

608. SUPPER, PHILOMENA. "The Curriculum in Health Education for Teachers of Elementary Grades," *Research Quarterly of the American Physical Education Association*, V (October, 1934), 107–22.

Points out the importance of adequate training for teachers of health education. Includes a bibliography on health education.

609. WARNOCK, FLORENCE M. "Opportunities for Teaching Health in the Elementary School through Motor Activities," *Journal of Health and Physical Education*, V (October, 1934), 15–17, 42–43.

A method of correlating the physical-education and health-education activities in the schools.

610. WILLIAMS, JESSE FEIRING, and SHAW, FANNIE B. *Methods and Materials of Health Education.* New York: Thomas Nelson & Sons, 1935. Pp. 332.

A compendium of health-education materials drawing largely on the scattered resources in the field.

Educational Writings

REVIEWS AND BOOK NOTES

Education in the primary school.—A significant contribution to the literature on elementary education has appeared in a volume dealing with the organization, objectives, content, and procedures of the primary school.[1] In the preparation of the book the authors were guided by the following purposes: "to formulate an organized set of principles dealing with the first step in formal education; to cover systematically and completely the work of these primary grades; and to make our discussions so detailed and specific that the teacher may learn how to proceed and may have at hand definite criteria by which to judge the outcomes of her work" (p. v).

The first part of the book (chapters i–iv) attempts to lay a basis for the later presentation and discussion of the various phases of the primary-school curriculum. The thought in these early chapters is based on the thesis that the rôle of education is "to add the social to the physical inheritance of man" (p. 3). Chapter i shows clearly the significance of speech, reading, writing, spelling, music, number, and graphic art as phases of the social heritage of every child.

Chapters ii and iii are devoted to issues and problems involved in the institutional care of children. Among the issues considered are the place of the nursery school and the kindergarten and the beginning and end of the period of primary instruction. Among the problems raised and discussed are the following: At what age should children be sent to school? In what types of activity shall they engage on entering school? At what age should formal elementary instruction begin? How shall we establish the boundary line between the pre-elementary training and the work of the primary school? At what age can the preliminary step in formal education be regarded as complete? In the manner in which these issues and problems are raised and discussed, the reviewer seems to sense the influence of Morrison's teaching.

In chapter iv, "Curriculum and Method," the objectives for the primary grades are separated into two classifications, designated as "Fundamental Processes" and "The Other Objectives." The first classification comprises reading, writing and spelling, number, music, graphic art, and speech. The second category includes health, worthy home membership, leisure, citizenship, ethical

[1] John Louis Horn and Thomas White Chapman, *The Education of Children in the Primary Grades*. New York: Farrar & Rinehart, Inc., 1935. Pp. x+292.

character, and introduction to nature and society. For the attainment of these objectives the authors recommend organized and habit-forming drill for the "fundamental processes" and group projects for the "other objectives." In the development of skills the authors emphasize a "straight attack on mastery" as "opposed to reliance on incidental learning as the principal method" (p. 48). For meeting the problem of individual variation, "individualization of instruction" is recommended as "far superior to the current practice of skipping and repeating grades" (p. 49).

In their treatment of the content and the measurable-achievement phases of the "other objectives," the authors state that they must of necessity be vague. The reviewer has the feeling, however, that the discussion could have been made more constructive and helpful if the authors had analyzed the vague and nebulous phrase "other objectives" into the specific activities which comprise health, worthy home membership, and the "other objectives" and had then shown how the primary school can help to attain these objectives.

With the first four chapters as a background, there follows a systematic discussion of the "skill" and the "non-skill" objectives. Three chapters are devoted to reading; three, to handwriting and spelling; two, to number; two, to speech; one, to music; and two, to art. The important work of training for character, training for health, and introducing the child to his social and natural environment is disposed of in three short chapters totaling only forty-six pages. Education for leisure, education for citizenship, and education for worthy home membership are not given systematic treatment, the assumptions being that the first of these objectives is "fully covered" by the discussion of music, art, literature, physical education, nature study, and handwork and that training for citizenship and for worthy home membership is implied in training for character. To the reviewer this second assumption seems unwarranted because it implies that all that is needed to perform the activities involved in good citizenship and home life is the possession of certain character traits.

The treatment accorded to literature as a means of primary-school education is disappointing. Although the importance of well-selected literary material in the development of desirable social traits and attitudes has become rather generally recognized, the subject receives only scant attention in this book. Moreover, in the section devoted to literature one may well question some of the counsel that is given. The teacher is advised, for example, "to continue the traditional school practice of memorizing" (p. 179).

The treatment of the fundamental processes is adequate and timely and well organized. The discussion deals, for the most part, with content, teaching procedures, and desirable outcomes. In the discussion on reading much stress is placed, and rightly so, on the determination of reading readiness. However, the importance of discovering learning readiness in handwriting, spelling, number, and the other learning fields seems to have been entirely overlooked.

This book has much to commend it. The discussion of reading, for example,

is adequate and very much in line with the developing science of education. Moreover, the volume raises many significant educational issues. The reviewer cannot escape the feeling, however, that the book would have been considerably improved had the authors faced the world of the primary-school child more objectively and utilized the results of research more fully.

WALTER SCRIBNER GUILER

MIAMI UNIVERSITY

Relations of church and state in the United States.—During the celebrated Scopes trial it was not always clear whether the fundamentalists or the American Civil Liberties Union assumed the more militant attitude in prosecuting their opponents in the public press and elsewhere. The opposing militancy in the two factions probably resulted in a more common-sense understanding of the issues than could have been accomplished by less display of heat. Similarly, in view of the emphasis that those interested in including moral and ethical training in the public schools placed on the possibility of public-school co-operation with religious organizations, it is interesting to pick up a well-organized brief to the effect that any recognition of religious organizations tends to create an unholy alliance between state and church dangerous to the theory of freedom of religious belief. Dean Johnson, of Union College, has produced such a brief in his discussion of church-state relationships in the United States.[1]

Dean Johnson first considers the reading of the Bible, the use of prayer, and the singing of religious hymns in religious exercises in the public schools. He then considers what he terms "Sectarian Influences Other than Bible Reading in the Public Schools," including such items as excusing pupils for religious instruction, allowing credit for religious instruction, public aid of sectarian schools, use of public-school buildings for religious services, religious exercises in Indian schools, and anti-evolution laws. He finally considers the matter of Sunday legislation. The author reviews the early Colonial attitude toward the relations of church and state and summarizes the development of religious influences in the schools. He carefully reviews constitutional, statutory, and administrative provisions with regard to the topics that he discusses and reviews with equal care the Supreme Court decisions of the states and of the United States. When he reviews, summarizes, and discusses conflicting provisions or decisions, he makes plain his own feeling that whatever the state does with any apparent motive to encourage the teaching of religion, or anything that it does in co-operation with organized religion, is probably out of line with American political theory. For instance, he is skeptical of allowing public-school credit for religious instruction given by religious teachers, and he holds that Sunday legislation is contrary to the principles of American law. The book is well annotated and carefully in-

[1] Alvin W. Johnson, *The Legal Status of Church-State Relationships in the United States:* With Special Reference to the Public Schools. Minneapolis, Minnesota: University of Minnesota Press, 1934. Pp. x+332. $3.00.

dexed. It is probably the best summary of religious influences on legislation and Supreme Court decisions that has been published.

HOLLAND HOLTON

DUKE UNIVERSITY

Educational legislation and school control.—When the United States Constitution was adopted, no specific provision was made for public education. The tenth amendment to the Constitution leaves education as one of the unmentioned powers reserved to the states of the United States. Consequently, public education is generally regarded as a state function. For years the legislatures of the states pursued the policy of delegating extensive powers and duties to the governing bodies of local administrative units. Their purpose was to promote the cause of public education and to encourage local initiative in carrying on the work of the schools. In recent years some states have moved to regain some of the powers and duties which they formerly delegated to the local administrative units. A current study[1] of the educational legislation since 1900 in three states—North Carolina, Maryland, and New York—purports to show the extent to which centralization, that is, the transfer of educational control from the local administrative unit to the state, is taking place.

Near the beginning of this study the author sets up three criteria which he deems desirable to bear in mind in an evaluation of the significance of certain centralizing trends. He then presents an analysis of the educational legislation in North Carolina and Maryland classified under the headings: state support; buildings; curriculum; and teacher training, certification, and salaries. The educational legislation in New York State he has classified under the following headings: state support, the University of the State of New York, Regents' examinations, judicial power of the commissioner of education, teacher training, and the curriculum. This study of the educational legislation enacted since 1900 in three important states shows a development of centralizing tendencies, but there is no evidence which indicates that centralization is being effected under a controlling philosophy of government or of educational administration. The author of this study emphasizes the fact that the issue of central versus local control is one of the most important problems facing those who would develop a constructive legislative program for a state school system. Therefore, in conclusion he presents nine principles that may be useful for administrators and legislators in evaluating the proposed legislation which is brought to them for their criticism or approval.

This study represents a careful piece of work; it is well organized and treats a topic which is significant in educational administration. Since its scope is limited

[1] George D. Strayer, Jr., *Centralizing Tendencies in the Administration of Public Education:* A Study of Legislation for Schools in North Carolina, Maryland, and New York since 1900. Teachers College Contributions to Education, No. 618. New York: Teachers College, Columbia University, 1934. Pp. vi+124. $1.50.

to three states, the practices of which may not be representative of practices in the remaining forty-five states, similar studies of the educational legislation in other states may profitably be pursued by those interested in this phase of educational administration.

C. B. ALTHAUS

UNIVERSITY OF KANSAS

The character of the learning process.—The literature of both general and educational psychology has in recent years contained an abundance of theoretical discussions and of experimental reports bearing on the problem of the nature of the learning process. These contributions relate to many aspects of the phenomenon of learning, and they frequently present divergent and even contradictory results and conclusions. A recent publication[1] represents a significant attempt to make a critical analysis of some of the mass of evidence which has been accumulated and to organize and interpret it in terms of the major problems which constitute the field of the psychology of learning.

The book consists of seventeen chapters, including an introduction and a conclusion. A series of chapters dealing with the various aspects and types of conditioning is followed by treatment of the effects of repetition in learning, the part played by emotions in learning, forgetting, forming and breaking habits, reward and punishment, the learning of skills, the rôle of intention in learning, and perception and thought. The entire volume is centered in the phenomenon of conditioned responses; the author assumes the position that all learning is a matter of conditioning and sets forth his conception of the psychology of learning in these terms.

The reader who is interested in the theory of learning will find the volume stimulating and helpful. The author has welded together a comprehensive and consistent explanation of the various problems of learning and has examined the explanation in a critical fashion in the light of numerous conflicting claims. He has made a genuine contribution in showing how his position is applicable to, and defensible at, a great many different points. The reader may disagree with the author's explanation in numerous instances, and especially with the fundamental position that all learning is a matter of conditioning, but he will be stimulated by, and impressed with, the carefulness and the completeness with which the basic point of view has been thought out and presented. He will be interested also in the many illustrations of learning drawn from everyday life that are used to clarify the discussion.

Although the book represents a fundamental attack on numerous problems of learning, the reader who wishes to be enlightened with respect to the learning process as it takes place in the school in the study of various subjects will discover little that is *directly* helpful to him. He will find that at most points a wide

[1] E. R. Guthrie, *The Psychology of Learning.* New York: Harper & Bros., 1935. Pp. viii+258. $1.50.

gap exists between the theoretical matters set forth in the book and this particular aspect of practice. This statement is intended to imply not that the theory is necessarily impractical but only that the reader will have to depend on his own efforts to bridge the gap—a task which will be exceedingly arduous except for the most gifted and mature student. Of course the teacher should possess an understanding of the fundamental character of learning, but he should also be able to understand the many practical cases of learning which he encounters in the schoolroom. The volume under consideration should be much more helpful in attaining the general understanding than in securing the more specific knowledge.

EDWARD F. POTTHOFF

UNIVERSITY OF ILLINOIS

The nature and treatment of stammering.—In his book, *Stammering and Cognate Defects of Speech*, published more than a score of years ago, Bluemel was one of the first in this country to show that stuttering is due, not to physical, but to psychological causes. Since that time Bluemel has continued his study of the cause and the treatment of stuttering, and his new book[1] expresses his latest views on this subject.

The publisher has done well by the book. It is in large print, well paragraphed, and easy to read. Its fourteen chapters discuss the conditioned reflex, the development of language and speech, inhibitions, conflict, difference between primary and secondary stammering, various theories of stuttering, and the author's method of treatment.

The chapter on the conditioned reflex is especially clear and helpful. The author believes that speech is developed as a conditioned reflex and that stammering is caused by an inhibition of the conditioned reflex which underlies speech. Stammering is divided into two parts, primary stammering and secondary stammering. The author says that during the early or formative years of life the conditioned reflex of speech is insecurely established and, consequently, is subjected to the hazard of inhibitions. When adult life is attained, the conditioned reflex is firmly fixed and no ordinary circumstances of life can efface it. "Frequently in the developmental period of speech there is evident for years the interplay of conditioned reflex and inhibition, with first one and then the other in the ascendant. The child speaks now fluently and now with stammered speech" (p. 70). In some children there is "an inadequacy of the conditioned response so that speech is defective even apart from the matter of inhibition" (p. 70). The author maintains that all children stammer to some extent during the learning period of speech and that transient inhibition is frequently observed among normal-speaking children. During the primary stage of stammering the impediment is nothing more than the partial inhibition of the conditioned reflex

[1] C. S. Bluemel, *Stammering and Allied Disorders*. New York: Macmillan Co., 1935. Pp. vi+182. $2.00.

of speech, but, if this stage continues for several years, there occurs secondary stammering. In this state there is an emotional condition. The emotional reaction occurs not only to words and letters but also to personal situations. In this secondary stage there is also confusion of thought. The patient is often bewildered and cannot understand what is said to him. Bluemel does not believe that stuttering of this secondary type occurs because of fear or anxiety. He says, "When stammering arises from associational influences, the disturbance in speech results from conditioned inhibition and not from the emotion which the situation may chance to recall" (p. 77). Again he says, "Observation shows that fear and embarrassment do not of themselves cause stammering" (p. 119).

The Travis-Orton theory that stuttering is caused by a conflict between the two hemispheres of the brain is discussed, and the theory is considered to be of "doubtful validity." Nevertheless, Bluemel pays the two originators of the theory the compliment of saying that their theory "is significant in the history of stammering, for it represents the first major attempt to solve the problem of stammering in neurological terms" (p. 141). Of the work of Travis, he says, "We venture the opinion that the important contribution of this investigator is not his theory of the dominant gradient but his conception of stammering as an extensive neurological disturbance in which the impediment of speech is merely a conspicuous symptom" (p. 142).

Bluemel's discussion of the treatment of stammering is brief but adequate and stimulating for those who are doing speech-correction work. Probably no other person in this country has made such extensive studies of the stuttering schools and of the methods used by them in the treatment of stuttering. Vocal exercises, breathing exercises, and phonetic training are used so widely in the treatment of stuttering that it is well that the author emphasizes the inadequacy of such methods. He says:

> The inhibition theory of stammering leads to certain inevitable conclusions regarding the problem of treatment. It becomes evident, for instance, that many accepted forms of treatment are misdirected. There is no logical purpose in breathing exercises, vocal exercises, articulation exercises, and many of the formal procedures of speech-training that one frequently encounters in the stammering schools and in the speech classes of the public educational systems. These drills and exercises are futile, for they aim neither at establishing the conditioned reflex of speech nor at removing the inhibition that constitutes the impediment [p. 151].

Surely the time has come when there can be general agreement with the author's statement that it is useless to teach the stammerer how to breathe and talk or to familiarize him with the anatomy and physiology of his speech organs. "Children and morons speak plainly despite their lack of anatomical and physiological learning" (p. 152). In the treatment of primary stuttering the author advocates the establishment of the conditioned reflex of speech. This result is brought about through the auditory stimulus of speech, by reading slowly and carefully to the stuttering child a story, sentence by sentence. At first the child is not asked to respond, but later he is asked to repeat each sentence after his

mother. At first the mother speaks in unison with the child, and later on he speaks without this stimulus. Difficult words are pronounced for the child. Games in which speech is a part of the play are used. The proper conditioning of speech should be continued long enough so that the conditioning will not be lost when the treatment is stopped.

Although the reviewer does not agree entirely with the author's point of view on stammering, he feels that all teachers of speech correction are indebted to Bluemel for this stimulating and uncontroversial presentation of his latest conclusions concerning the cause and the treatment of stammering. No teacher of speech correction can afford to be without this book.

SMILEY BLANTON

AMERICAN SPEECH CORRECTION ASSOCIATION
NEW YORK CITY

A new history of our country for elementary schools.—In the Preface of a textbook in history[1] the authors state that pupils in Grade VII should study the origins of American institutions; in Grade VIII, the development of institutions in the United States; and in Grade IX, American problems in the light of their historical settings. The volume under review was written for Grade VIII. This scheme and sequence, which the authors claim is the best, is not in accordance with that of the Commission on the Social Studies of the American Historical Association. This commission recommends for Grade VI, the systematic narrative history of America, including European beginnings; for Grades VII–IX (junior high school level), a systematic development of world-civilization; for Grade IX or X, world-geography; and for Grades XI and XII, the major phases of present-day society, including major social, economic, and political issues and problems.

This book claims to be functional in the sense that it "ought to help youth make the necessary adjustments to life" (p. iii). It may fairly be claimed to be of assistance in accomplishing this purpose. It is organized in eleven units, with a combination of logical and chronological sequence. The titles of the units are brief and simple, yet significant and suggestive. The chapter headings are similar to those employed in many textbooks in history for senior high school and elementary college courses, however, and on this basis may be criticized as not particularly functional. The volume is written in a more attractive and challenging style than most elementary textbooks in this field.

Each unit has a preview, which serves as a brief connecting link between units. This scheme suggests the "overview" employed in some types of unit instruction in social studies. This same type of overview was noted by the writer in his review of two books on the backgrounds of American history appearing in the June, 1935, issue of the *Elementary School Journal*.

[1] Smith Burnham and Theodore H. Jack, *America, Our Country*. Philadelphia: John C. Winston Co., 1934. Pp. xvi+636. $1.60.

The illustrations are suggestive but not conventional. Many of them were sketched by hand and reproduced in print. Maps are relatively scarce, but those that are included are really significant. Teaching procedures and suggestions are scant, but suggested subject matter, problems, and projects are abundant. One unfortunate feature of the book is found in the Appendix; that is to say, the texts of the Declaration of Independence and of the Constitution of the United States are printed in very small type.

Some notably good features of the book are illustrated in the discussion of the geographic setting and influence in the chapters on "Our New-World Home," "The Coming of the Revolution," and "The War for Independence," and in the attractive narrative style and thread of connection between paragraphs, topics, and divisions of the text.

This book illustrates, as do most of the more recent publications, the substantial improvement that is taking place in the writing of textbooks, particularly in their psychological adaptation to the readers for whom they are designed. In this respect this book has a distinct contribution to make.

As a final observation, the reviewer has the following question to raise: In the current confusion and variety of organization of treatment of both elementary- and secondary-school social-science subjects, *what are the authors of textbooks and the school administrators to do in applying the subjects to the new curriculum trends?* One such curriculum is that suggested by the new Virginia revision program, which builds and organizes its whole curriculum for both elementary and secondary schools on *eleven major functions of society* and just *one center of interest* for each year—a revolutionary type of scope and sequence and general organization for a "functional" or "core" curriculum.

R. E. SWINDLER

UNIVERSITY OF VIRGINIA

New textbooks in geography.—The book under review[1] is the final volume of a five-book series in elementary geography (the earlier titles being *Home Folks*, *World Folks*, *American Lands and Peoples*, and *Foreign Lands and Peoples*). In the present volume a survey of the world is made through a study of world-industries. The material is organized in terms of the great basic industries of mankind, the greater portion of the space being given, naturally, to agriculture and manufacturing.

Hunting, fishing, and the forest industries are presented by regional studies world-wide in scope, for example, tropical grasslands and tropic forests. For agriculture the materials are grouped by products in their world-settings. This arrangement is also used in presenting mining, which is, in addition, included in the organization of manufacturing. A discussion is given of the development and the significance of important manufacturing industries and industrial areas of

[1] J. Russell Smith, *Our Industrial World*. Philadelphia: John C. Winston Co., 1934. Pp. viii+390+20 plates. $1.60.

the world. There are a short chapter on transportation, communication, and trade, partly historical in character, and a summary section on type nations in the world-trade. A chapter on mathematical geography is practically an appendix.

The book is written in Smith's usual lucid and interesting style. Because of the character of the material and the increased maturity of the pupils for whom the book is written, little use is made of concrete human stories, such as were found in the preceding volume. The book includes an abundance of pertinent black-and-white production and location maps, diagrams, diagrammatic figures, graphs, and pictures. Twenty plates of political and physical maps, uniform in style with those in the other books of the series, are given together in a section at the end of the book. A statistical appendix presents a mine of valuable data. A reasonably simplified climatic-regions map of the world is introduced in color and is used to aid in the study of industries.

Although *Our Industrial World* is essentially a study in industrial geography, thoughtful teachers who are seeking materials in the field of social studies will find it a timely contribution. One who studies the book intelligently cannot fail to realize its value in teaching an appreciation of the complex interrelations of the peoples of the world arising from their use of one another's products and from their competition with one another. Nor can one leave the book without sensing the possibilities in the story of development behind some of our present-day economic institutions. Equally important are the significant discussions of the present-day status of various industries and the pertinent pointing-ahead to possibilities and probabilities in the future.

The essential content of the five-volume series is incorporated in a two book series[1] by the same author. Both series are based on the so-called "single-cycle-plus" plan of organization, in which the work is introduced by a study of type regions, followed by as thorough a study of countries as space permits. Obviously, some of the materials of the first series had to be omitted, but most of the materials are combined in the new series. Book I contains the type studies and a detailed study of North America and our island possessions. Book II covers Europe, Asia, Africa, Australia, South America, and the United States in its special relations to the world. The latter part of the book is a condensed version of *Our Industrial World*. To the teacher who, of necessity or desire, must use a geography series of two rather than five volumes, the *Human Use* series presents an adequate alternative.

Like all of Smith's volumes, these books are characterized by a vigorous, direct, and simple style. Frequent use of concrete human illustrations adds to the interest of the country studies. Geographic relationships are stressed, and many provisions are made for the acquisition of geographic habits of thinking.

The mechanical makeup of the book is excellent. The type and the spacing

[1] J. Russell Smith, *Human Use Geography:* Book I, pp. x+482+34; Book II, pp. x+516+26+3 plates. Philadelphia: John C. Winston Co., 1934 (revised). $1.52 each.

of the page make easy reading. The type studies in Book I for use with the younger children fittingly appear in rather large print. The small black-and-white maps, the diagrams, and the pictures are clear, well chosen, and well captioned. On the human-use maps of the continents the regions are marked with symbols which bear some resemblance to the land use; for example, little green pine trees mark the northern evergreen forests. Type pictures are placed around the margins of the maps, not on them. Political maps are clear and definite, but many of the physical maps have too many lines and names. Suggestions for additional exercises and tests are given at the ends of the sections. Much material is to be found in the up-to-date tables of the Appendix.

The Smith volumes are to be recommended highly.

RUTH R. WATSON

CURRENT PUBLICATIONS RECEIVED

GENERAL EDUCATIONAL METHOD, HISTORY, THEORY AND PRACTICE

AICHHORN, AUGUST. *Wayward Youth.* New York: Viking Press, 1935. Pp. xiv+236. $2.75.

FENTON, NORMAN, with the collaboration of JESSIE C. FENTON, MARGARET E. MURRAY, and DOROTHY K. TYSON. *The Delinquent Boy and the Correctional School.* Claremont, California: Claremont Colleges Guidance Center, 1935. Pp. 182. $1.50 (paper), $2.00 (cloth).

INGRAM, CHRISTINE P. *Education of the Slow-learning Child.* Yonkers-on-Hudson, New York: World Book Co., 1935. Pp. xii+420. $1.80.

Readings in Psychology. Edited by Charles E. Skinner. New York: Farrar & Rinehart, Inc., 1935. Pp. x+854. $4.00.

ROEMER, JOSEPH; ALLEN, CHARLES FORREST; and YARNELL, DOROTHY ATWOOD. *Basic Student Activities:* Organization and Administration of Home Rooms, Clubs, and Assemblies. Newark, New Jersey: Silver, Burdett & Co., 1935. Pp. xiv+368. $2.20.

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BOOKS PRIMARILY FOR ELEMENTARY-SCHOOL TEACHERS AND PUPILS

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